



CrossTalk

August 2025

66 Years Of Service To Amateur Radio & Our Community

Issue 66 : 08

A

2025 Club Officers

President :	Jonathan Pearce WB2MNF	Trustees - 4 Year Term	
Vice President :	Ronald Block NR2B	Charles Lanard KD2EIB	(2022-2025)
Treasurer :	John O'Connell K2QA	Sheldon Parker K2MEN	(2023-2026)
Recording Secretary :	John Zaruba Jr K2ZA	Len Rust W2LJR	(2024-2027)
Corresponding Secretary :	Michael Resnick N2WOQ	Earl Moore KC2NCH	(2025-2028)

Directors - 3 Year Term

Chris Prioli AD2CS	(2023-2025)	Bill Price NJ2S	(2024-2026)
James Wright N2GXJ	(2023-2025)	Jeffrey Garth WB2ZBN	(2025-2027)
Al Arrison KB2AYU	(2024-2026)	Frank Romeo N3PUU	(2025-2027)

Inside This Issue...

General Membership Meeting
Wednesday, August 06, 2025 @ 1900 Hours
In-Person & ZOOM : 914 7364 1808, 843147

Tech Saturday Forum
Saturday, August 09, 2025 @ 0900 Hours
W2MMD Clubhouse

License Testing Session
Thursday, August 14, 2025 @ 1900 Hours
W2MMD Clubhouse

Board of Directors Meeting
Wednesday, August 20, 2025 @ 1900 Hours
W2MMD Clubhouse

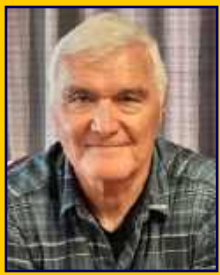
Dinner @ The W2MMD Clubhouse
Wednesday, August 27, 2025 @ 1800 Hours

Tuesday Afternoon 2M Net @ 1200 Hours

Thursday Night 2M Net @ 2000 Hours

Monday & Thursday Night 40M Net @ 1930 Hours
7.170 MHz (+/- 5 or 10 kHz)

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President's Letter

Jon Pearce WB2MNF



August 2025

After a busy June dedicated to Field Day activities and a quiet July, August brings a return to a familiar pace at the Gloucester County Amateur Radio Club setting the stage for an active end of the year. Here's what's been happening and what's coming up.

Field Day Success

The 2025 Field Day continued a strong tradition of success, achieving an even higher score than previous years. **Jim Wright N2GXJ**, has detailed the results on **Page 8** of this issue, so the numbers won't be repeated here. What stands out is the remarkable participation from hams of all ages and interests, working together for a shared Club goal. Many newer members gained operating experience, especially on Chris Prioli's 20-meter phone station, while the team earned all available bonus points, significantly boosting the total score. In a hobby split between "operators" who excel on the air and "experimenters" who build new gear, the operators led this time with strong support from others helping to maximize contacts, erect antennas and towers, make food and helping to prep and clean up the site. Our results show that a Club with a "relaxed" approach to Field Day can create a successful event with high member participation and much fun for all.

Tech Saturday Tape Measure Yagi Build

Chris Prioli AD2CS once again orchestrated an outstanding Tech Saturday event, where about a dozen Club members assembled tape measure Yagi antennas and attenuators for fox hunting. This project, popular every few months, has resulted in dozens of these antennas appearing at fox hunts and other activities, showcasing their practical value. Tech Saturday construction projects consistently draw significant member engagement, underscoring the Clubhouse's role as a central hub for hands-on learning.

HamFest Plans

Hopefully you already have Sunday, September 7th on your calendars for the annual HamFest at the 4-H grounds, just up the hill from the Clubhouse - a major Club event. **Ron Block NR2B**, and the team have been diligently planning to ensure a smooth event and are seeking additional volunteers for key tasks. Three engaging seminars are scheduled, and a 20-meter WSPR balloon launch is planned for early in the day, with tracking to follow throughout the morning. Whether as volunteers, seminar attendees, sellers, or buyers, strong attendance from Club members is expected to make it a success.

August 9, 2025 Tech Saturday Forum - TIDRADIO H3 Deep Dive

The August Tech Saturday will focus on the TIDRADIO H3, one of the newest low-cost amateur radios available. These radios feature USB-C charging and programming, Bluetooth phone apps for control, AM reception on aircraft bands, and very affordable prices.

President's Letter - Continued on page 3

An available firmware modification adds a large color S-meter, ideal for fox hunting. During this session, the features will be explored, the original and modified firmware compared, and performance tested with wattmeters and spectrum analyzers. Introductory information about these radios will be published shortly before the event to help participants prepare.

STEM Activities

STEM efforts at Woodruff Middle School have extended into the summer with a “STEM Camp” held at the Clubhouse on Monday afternoons. The goal is to provide students with hands-on experience covering topics from the Technician Class licensing test. In the first two weeks, students explored the HF station, built a 20-meter dipole, and assembled 915 MHz unlicensed Meshtastic radios, using Bluetooth connections on their cell phones for communication with the devices. Upcoming sessions will include programming and using HTs under control operator supervision, constructing tape measure Yagis, participating in fox hunts, and potentially making satellite contacts. The aim is for all four students to pass their Technician exams by mid-August, though the primary focus remains building their skills and confidence in radio technology.

Upcoming Contests

The fourth quarter offers prime opportunities for VHF operating, with several contests on the horizon. The September VHF Contest runs from September 13-15, and plans are in place for the VHF antennas to sit atop the new 72-foot tower for that event. The Clubhouse's VHF station, featuring one of the best equipment setups available, makes it an ideal spot for anyone interested in VHF operating to participate that weekend.

Additionally, the ARRL Earth-Moon-Earth (EME) or moonbounce contests are scheduled for October 11-12 and November 9-10. The EME station, recently upgraded with a rotator and moon-tracking hardware and software, positions the Club well for success. Bouncing radio signals off the moon is a rare feat, so participation is encouraged for those seeking a unique challenge.

915 MHz Meshtastic Radio on Clubhouse Tower

The 89-foot tower, designated for UHF and microwave activity, now hosts its first radio - a 915 MHz solar-powered Meshtastic node. Though not a ham radio, it expands the Meshtastic network from Philadelphia into the area, allowing STEM students who built these radios to see the extensive network of nearly 100 nodes. This contrasts with the limited 433 MHz network, offering more communication opportunities. Several GCARC members have purchased these radios and are exploring their use in emergency communications or similar functions.

CPR and First Aid Course

At the Clubhouse on Sunday, October 5, 2025 GCARC will host a CPR and First Aid training session led by Club member **Josh Boylan KE2FSC**, an EMT trainer and paramedic. The session will cover the “Heart Saver CPR” course and first aid topics relevant to Clubhouse activities. Josh has donated a first aid kit tailored to common injuries here, which will be demonstrated for use. A sign-up will be announced later, so mark the date if interested.

August sets the stage for an engaging Fall season at GCARC, with hands-on projects, contests, and educational opportunities ahead. Whether operating, building, or learning, involvement keeps the Club strong, and we hope to see many members participating in these activities.

73 de Jon Pearce, WB2MNF

Welcome New Club Members :

Lance Appel KE2UC (Returning Member), an Amateur Extra Class who lives in Vineland, NJ.

Daniel Bates KE2GJA, a Technician Class who lives in Deptford, NJ.

William Bennett KE2GJG, a Technician Class who lives in Woodbury, NJ.

Steven Broomhead KB2RTZ (Returning Member), a General Class who lives in Blackwood, NJ.

Angel Papineau, Associate Member, who lives in Philadelphia, PA.

Neil Sternstein K2RCH (Returning member), an Amateur Extra Class who lives in Deptford, NJ.

We are glad to have you as a member of the Club and hope to see you regularly at Club meetings, events, and activities. Hope to see you at :

- **The August 6th General Membership Meeting, either in-person or on ZOOM**
- **The August 9th Tech Saturday Forum @ the W2MMD Clubhouse**
- **The Board of Directors Meeting on August 20th**
- **The Dinner at the Clubhouse on August 27th**

We also hope to “SEE” you on the “AIR” on the following nets :

- **Sunday Night Skywarn 2 Meter Net @ 1930 Hours.**
- **Sunday Night ARES 2 Meter Net @ 2000 Hours.**
- **Tuesday AfterNoon 2 Meter Net @ 1200 Hours.**
- **Monday & Thursday Night 40 Meter Nets on 7.170 MHz (+/- 5 or 10 kHz) @ 1930 Hours.**
- **Thursday Night Rag Chew 2 Meter Net @ 2000 Hours.**

All 2 Meter Nets are on our 147.180 MHz (PL 131.8) repeater or on EchoLink W2MMD-R.

Looking For Volunteers To Help With The Technical Forums At The GCARC HamFest By Stan Slachetka WA2JRZ (stanplans@gmail.com)

I am looking for volunteers to assist with the Technical Forums at the HamFest on September 7, 2025. The primary responsibilities will be to help me with the preparation and setup for the forums, possibly introduce one or more of the speakers, and make sure that things run as smoothly as possible during the sessions without any serious technical glitches.

This will be a great opportunity to participate in and support an important part of our HamFest and provide you with great learning experience and unique perspective on topics of interest to our Club members and the Amateur Radio community. Even more important, you will provide us with the necessary back up if one of us can not attend the day of the HamFest.

The topics at this year's forums will be :

- **Your Antenna Performance In 3D By Jim Wright N2GXJ**
- **ARRL Update By ARRL Atlantic Division Director Bob Famiglio K3RF and ARRL SNJ Section Manager Ron Fish KX1W**
- **STEM, Kids, and Ham Radio By Angela Metzger KE2DRJ**

As you can see, these are going to be great programs and a lot of fun. Please contact me if you are interested in volunteering.

Also members who wish to help out at the 2025 HamFest can go to our **2025 HamFest Volunteer Sign-Up Sheet** at : <https://gloucestercountync.weebly.com/2025-hamfest-sign-up-sheet.html>

General Membership Meeting

Wednesday, August 06, 2025 @ 1900 Hours

Pfeiffer Community Center

Simulcast Live Via ZOOM : **Meeting ID : 914 7364 1808; Passcode : 843147**

Join ZOOM Meeting Link : <https://bit.ly/3Pt4dLO>

Go to : <https://gloucestercountyarizona.weebly.com/2025-content--activities--resources.html> to download the ZOOM log-on instructions PDF

Short and Long Term Variability of HF Propagation

By Frank Donovan W3LPL

HF radio propagation begins with the Sun's powerful and ever-changing magnetic field. While many of us are familiar with sunspots and the solar cycle, this month's Zoom presentation by Frank Donovan W3LPL, offers a deeper exploration into the solar dynamics that drive both short-term disruptions and long-term variability in HF communications.

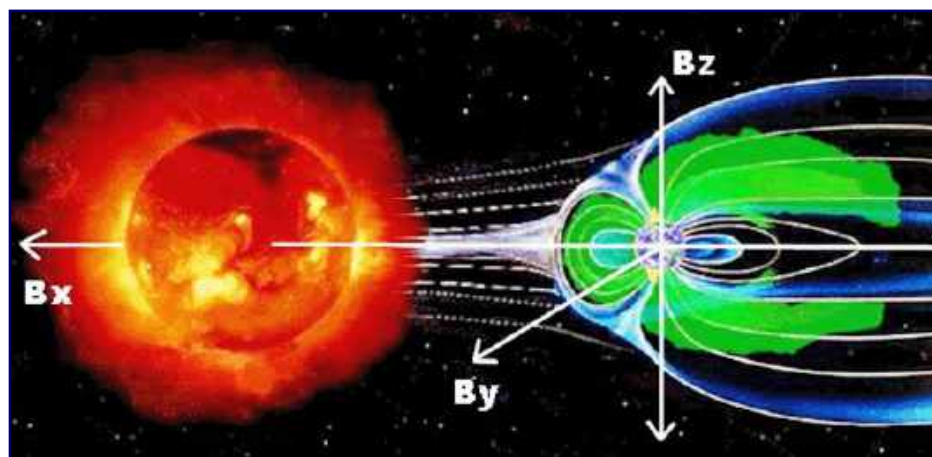
Key topics include :

- Solar cycle variability over the past 60 years
- Current status of Solar Cycle 25 and its trajectory toward the next solar minimum
- Ultraviolet radiation from the Sun's corona and its role in ionizing Earth's ionosphere
- Propagation of the solar magnetic field throughout the solar system via the solar wind
- Sudden HF degradation caused by solar flares
- Impact of coronal mass ejections on HF communication
- HF disruptions caused by coronal holes during the years following solar maximum
- Minor geomagnetic storms driven by coronal hole high speed stream activity
- Strong-to-severe geomagnetic storms triggered by coronal mass ejections

Our program concludes with a forward-looking analysis of HF band propagation characteristics through the remainder of Solar Cycle 25, projecting trends as solar activity gradually declines toward the anticipated solar minimum around 2030.

This should be a fact rich, energy dense program providing us with an opportunity to reaffirm and expand our knowledge of HF propagation as we head into the solar minimum.

See you there.





Tech Saturday Forum

August 09, 2025 @ 0900 Hours

W2MMD Clubhouse

Forum Topic : Programming The TIDRADIO TD-H3 HT

August Tech Saturday - TidRadio TD-H3 Firmware Upgrade and Checkout



TIDRADIO TD-H3 Ham Radio
Multi-Band Two Way Radio
with AirBand & TD-771 Long
Antenna,USB-C Programming
& Charging,2500mAh
Battery,One Key Frequency
Match,DTMF FM AM NOAA
VOX SCAN,Walkie Talkies

Visit the TIDRADIO Store
4.5 ★★★★★ (458) | Search this page
100+ bought in past month

-7% \$24.99
List Price: \$26.84

prime One-Day
FREE Returns

Redeem 5% off orders \$60+ promo code:
FULL60CUT Shop items

Redeem 5% off orders \$100+ promo code:
FULL100CUT Shop items

8 Bands Freq
AM & FM
USB-C
Programming

Additional resources are available at the Skunkworks.W2MMD.org website under the Projects tab :

<https://wp.w2mmd.org/wp/tidradio-h3-resources>

There is a new website for the Gloucester County Amateur Radio Club Volunteer Examiner Team. Everything you need to know about getting your ham license or upgrading your license can be found on this website. Pass It Around!

<https://veteam.w2mmd.org>

"Dinner @ The W2MMD Clubhouse"
Wednesday, August 27, 2025 @ 1800 Hours

Pictures From Space - July 2025

By Jon Pearce WB2MNF

Many GCARC Club members get excited when the International Space Station (ISS) broadcasts Slow Scan TV (SSTV) images during its passes. Some have successfully received these images using portable antennas like tape measure Yagis or Arrow antennas connected to their HTs and listening on the ISS SSTV frequency of 145.800 MHz. They decode the images by holding their smart phones, running SSTV software, near the radio's speaker.

It's fun to capture these images directly, but our Clubhouse's SatNOGS station takes it a step further. Equipped with a 22-element 2m crossed Yagi antenna, it tracks the ISS, records the transmissions, and decodes the images automatically, getting far greater image quality than with handheld or omni-directional antennas.

SatNOGS is a global satellite telemetry network that captures data transmitted on Amateur Radio frequencies by various satellites. Our station runs on a Raspberry Pi and records these transmissions and uploads them to an international database, where satellite developers can analyze their spacecraft's performance. Unlike most SatNOGS stations that use omni-directional antennas, our high-gain Yagi setup provides superior signal capture, making it one of the top-performing SatNOGS stations, especially in the northeastern U.S. That's how we can get great-looking pictures during these events.

Below is one of the SSTV images we captured from the ISS during this event. For more captured images, go to the **Club Member News** page at : <https://gloucestercountyarac.weebly.com/club-member-news.html>



Regional (Atlantic & Hudson Divisions) Hamfests & Events

August 02, 2025 : Tompkins County Amateur Radio Association, TCARA Hamfest, Trumansburg Fairgrounds, 2150 Trumansburg Road, Trumansburg, NY. www.tcara-ny.org

August 09, 2025 : Uniontown Amateur Radio Club, 75th Annual GABFEST, 433 Old Pittsburgh Road, Uniontown, PA. www.w3pie.org

August 09, 2025 : Southern Adirondack Hamfest, Speculator Pavilion and Ballfield, 2834 NY 30, Speculator, NY. www.adkhamfest.org

August 10, 2025 : Mid-Atlantic Amateur Radio Club, Valley Forge Hamfest, Kimberton Fire Company Fairgrounds, 752 Pike Spring Road, Phoenixville, PA. www.marc-radio.org

August 16, 2025 : Keuka Lake Amateur Radio Association, 17th Annual Keuka Lake Amateur Radio Association Hamfest, Howard Community Center, 7481 Hopkins Road, Howard, NY. www.klara.us

August 23, 2025 : ROC City Net, 7th Annual Hamfest, Log Cabin Restaurant, 2445 West Walworth Road, Macedon, NY. www.roccitynethamfest.com

August 24, 2025 : Skyview Radio Society, Swap N Shop, Skyview Radio Society Clubhouse, 2335 Turkey Ridge Road, New Kensington, PA. www.skyviewradio.net

Field Day 2025 Preliminary Total Score - W2MMD 9A SNJ

2,952 Points CW (1,476 QSO x 2)

2,160 Points Digital (1,080 QSO x 2)

482 Points Phone (482 QSO x 1)

5,594 x 2 Power Mult = 11,188 QSO Points

+ 2,465 Bonus Points

13,653 Preliminary Total Score

For Comparison : Highest W2MMD Score We Have Had In Years!

2025 : 9A, 3,038 QSOs, Preliminary Score : 13,653

2024 : 9A, 2,123 QSOs, Preliminary Score : 9,791

2023 : 7A, 2,542 QSOs, Preliminary Score : 11,616

- ◆ **Congratulations To All On The Great Club Effort!**
- ◆ **Now we wait for the ARRL to post final scores in December 2025 QST**
- ◆ **Thank You!**
- ◆ **Well Done GCARC!**

GCARC Monthly VE Exam Testing Summary - July 2025

By Chris Prioli AD2CS

The regular monthly VE session was held on Thursday, 10 July at the W2MMD Clubhouse. There were four exam candidates, three of which were seeking a new Technician (Element 2) license level, while the fourth was there for a license upgrade to General (Element 3) status. The session was attended by a total of 8 GCARC Volunteer Examiners. The Team Liaison for this session was Chris Prioli AD2CS.

The candidates, who were all successful in their basic testing endeavors, were :

- **Daniel Bates KE2GJA, newly-minted Technician from Deptford, NJ**
- **William Bennett KE2GJG, newly-minted Technician from Woodbury, NJ**
- **Angel Papineau (call sign not yet issued), newly-minted Technician from Philadelphia, PA**
- **Aidan Pham KE2GFK of Mickleton, NJ, who earned his General rating upgrade**

The VE Team proctored the exam session using completely electronic methodologies. This means that the candidates completed the exams online, and that all grading and submissions were done online as well.

The GCARC VE Team that proctored the exam session included the following Volunteer Examiners :

- **Gary Reed N2QEE**
- **John O'Connell K2QA**
- **Rich Subers W2RHS**
- **Court Smith KD2SPJ**
- **Earl Moore KC2NCH**
- **Mike Resnick N2WOQ**
- **Steve Farney W2SEF**
- **Chris Prioli AD2CS**

The next regularly-scheduled VE session will be held on Thursday, 14 August 2025, at 1900 hrs at the W2MMD Clubhouse. The VE team will be using the ExamTools system to its fullest capability, within our current technological means.

It is important that all test candidates going forward will be advised, whenever possible, to pre-register and pre-pay for the exam online. Specifics of that process are explained at : <https://veteam.w2mmd.org>



www.facebook.com/W2MMD



twitter.com/w2mmd_gcarc



What's happening in the ARRL Southern New Jersey Section??

Subscribe to the ARRL SNJ Section Groups.IO

<https://groups.io/g/ARRLSouthernNewJerseySection>

Membership Badges Ready For Pick-up.
*They can be picked up at the W2MMD Clubhouse or
at the monthly General Membership Meetings*

Dave Danichkin KD2UXC
Jim Foster W3JNF

Jack Snyder AI2D

New Members Support Group & Discord Channel

- Organized By Jim Beury KE2DRN
- Objective : To focus Club resources on the needs of newly licensed members
- Supported by “new_members” Discord Channel

Additional Support :

- Saturday Morning @ The W2MMD Clubhouse
- GCARC@MAILMAN.QTH.NET Club E-mail Reflector
- E-Mail President @ w2mmd.org



So you find our website confusing, can't find anything, Well So Do I!!

I have created a page called “Quick Links”

**On this page you will find “Buttons” to some the most popular pages
I will add more as time goes on, but I hope this helps your journey navigating
through your Club Website!**

<https://gloucestercountyarcl.weebly.com/quick-links.html>



NTS Resources

The National Traffic System® (NTS) is a network of Amateur Radio operators who move information during disasters and other emergencies. General messages offering well wishes also move through the NTS to help test the system and to help Amateur Radio operators build traffic handling skills. While the NTS is primarily set up to serve the United States and Canada, it is possible to move traffic internationally through the NTS through various local, regional, area, and international network connections.

- ♦ NTS 2.0 : <https://nts2.arrrl.org>
- ♦ NTS Manual : <https://www.arrrl.org/nts-manual>
- ♦ NTS Methods and Practices Guidelines Table of Contents : <https://www.arrrl.org/table-of-contents-nts-methods-and-practices-guidelines>
- ♦ Handling Instructions : <https://nts2.arrrl.org/hx-handling-instructions>
- ♦ Numbered Texts : <https://nts2.arrrl.org/numbered-texts>
- ♦ Form Encoding Rules for Form : <https://nts2.arrrl.org/form-encoding-rules-for-forms>

DAs and DITs

>> Club member **Bob Pantazes W2ARP** is a guest of **Eric Guth 4Z1UG's QSO Today Amateur Radio Podcast Episode 526** which can be viewed at : <https://www.qsotoday.com/podcasts/w2arp>

>> Congratulations to **Harry Bryant AA2WN** and **Diann Gentile KD2BND** on becoming ARRL Life Members.

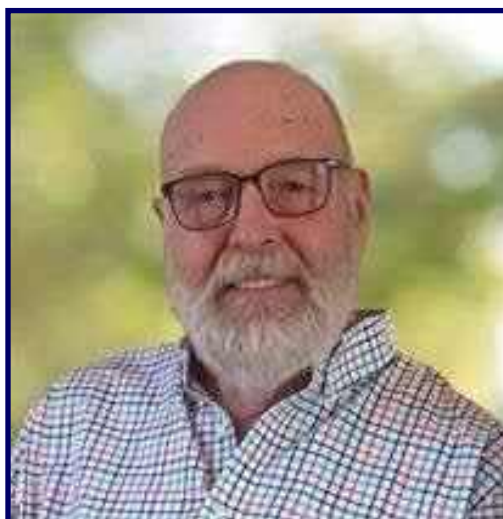
>> Condolences to the **Garden State Amateur Radio Association** on the loss of long time member and past president **John King KA2F**.

>> The **Old Barney Amateur Radio Club** (<https://obar.org>) will be operating W2T from the Tucker's Island Lighthouse (USA911) in the Tuckerton Seaport Museum in Tuckerton NJ on August 9 from about 1300-2000 UTC for National Lighthouse Weekend. Activity mostly on 40 and 20 SSB and FT8. QSL via N2OO.

>> The Club regrets the passing of two of our long time members :



Lee Marino N2LAM



Rolf Wurmbach KD2VQG

Need a ride to a Club meeting, event, or activity?

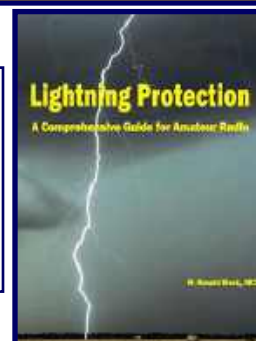
Just send a message to the Club's e-mail reflector asking if a member can pick you up

[GCARC <at> MAILMAN <dot> QTH <dot> NET](mailto:GCARC@MAILMAN.QTH.NET)

All Club members have access to this FREE e-mail service



Lightning Protection :
A Comprehensive Guide for Amateur Radio
Author : W. Ronald Block, NR2B
Contact : ron@wrblock.com
Website : www.wrblock.com



Diving and DXing in Bonaire : A "Successful Failure" With The zBitx Radio

By Jonathan Pearce WB2MNF

I like to keep up with some of the newest low-priced ham radio gear, so back in March I decided to order the zBitx QRP HF radio, priced around \$200. Around the start of June it hit me that I could pair this new toy with my upcoming two-week underwater photography workshop in Bonaire. The plan was to take the radio along, operate as PJ4/WB2MNF, and snag some DX contacts between dives.

This meant scrambling to get an antenna, so I talked to **Jim Wright N2GXJ**, **John Zaruba K2ZA** and a few other Club members and ended up with a 62-foot end-fed antenna (details on the equipment are below). I also caught a good YouTube review of an antenna tuner, which I ordered along with a couple of cables to link the tuner to the antenna and the radio. Then I waited anxiously for the zBitx to arrive, hoping it would make it before I had to leave for the trip. Finally it showed up Tuesday before my departure, leaving me little time to test it out. I checked the output with the wattmeter we built at Tech Saturday, confirming its advertised 5 watts so at least the radio was good to go. Running only 5 watts, very QRP, I decided that FT-8 would be the best mode, avoiding the need to bring a microphone for SSB and realizing that my CW skills were way too dated to operate that mode. (In retrospect SSB would have been a better option...)

The Antenna

My original idea was to focus on 10 meters, so I wound the antenna down to about 17 feet. I gave it a shot with the antenna dangling from my second-floor porch into the trees behind my house, but that didn't work out too well. So, I switched to 20 meters, lengthening the antenna to 34 feet and letting it droop into the branches again. That worked great and I made a bunch of contacts that way.

I went with a shortened antenna for a couple of reasons: first, I hadn't the time to test it fully extended - my backyard's too small, and I couldn't make it to the Clubhouse to test it fully extended. Second, I figured space in Bonaire would be tight anyway, so I rolled it out to 34 feet with the rest spooled up. It would've been nice to bring a keyboard, monitor, and mouse along with a VNA to fine-tune things, but I didn't have room in my luggage so I hoped the SWR meter on the radio would work well enough to adjust the tuner (it did). At home I used a VNA to determine the tuner settings for 20, 15, and 10 meters, getting a SWR lower than 1.5:1 on all of those bands.

Licensing

Before the trip, I dug into Bonaire's licensing rules and learned that as a Dutch principality my U.S. license is valid with a PJ4 prefix. Surprisingly, reciprocity limits HF privileges to Advanced or Extra class licenses - good thing my vintage Advanced class qualifies, though General class hams with HF privileges stateside might be out of luck abroad. I taped a copy of my license to the radio that was in my backpack expecting TSA scrutiny but both Miami and Philadelphia agents waved it through without a fuss.

Radio Setup

The radio runs on a Raspberry Pi zero that needs the correct time for FT-8 so I connected a keyboard, mouse and monitor to it and got it on my home network for setup. I also set up VNC thinking that I might be able to connect to the Pi that way in Bonaire but also realizing that without the peripherals I'd have no way to connect to the hotel Wi-Fi. At home I did connect it to my phone's hotspot but that didn't help in Bonaire. Fortunately I didn't need to connect to the Pi while away.

Diving & DXing In Bonaire - Continued on page 13

The DXpedition

Upon arriving in Bonaire, I got my dive gear sorted first, then turned to the radio. My second-floor room overlooked the ocean and with no nearby trees for elevation I decided to run a line out to the dock, wrapping it around the edge and securing it to the antenna's end. I was a bit worried the resort folks might challenge me - I'd opted for asking forgiveness instead of permission - but nobody bothered it. I set the tuner on the patio table and ran a short coax through the door to the radio on the bed.

Setup completed, I stuck two of the eight 18650 no-button batteries in the radio (the battery holder is quite short - some 18650s may not fit), plugged the battery pack into the radio (there's no on-off switch) and started calling CQ as PJ4/WB2MNF.

Nobody answered. Ever...

I checked the PSK Reporter maps and saw that I was getting received all over the world - in the US, Europe, and even Australia. Five watts thru the tuner and to the ½ wave antenna running down to the waterline was working amazingly well. Then why wasn't anyone responding?

The Failure

It took about two days of research to convince me that the problem was in the FT-8 protocol itself, or at least in how the zBitx implemented it, because it seemed unlikely that FT-8 couldn't handle this relatively common situation. As a test I changed the callsign to WB2MNF and got an immediate response, confirming my hypothesis. I then embarked on another day of querying the zBitx groups.io site and other sources to see if there was a solution that I could implement from here (or anywhere) that would let me actually make some contacts.

There isn't one.

This is apparently an issue with any special callsign and some implementations of FT-8 - it can't handle callsigns other than the normal format. My only option here would have been to apply for a temporary PJ4 callsign that would be in the conventional format, which I obviously didn't have time to do.

Batteries and Heat

Another hiccup I hit during initial tests was the radio's appetite for batteries. Calling CQ continually on FT-8 would cook a pair of batteries in about 20 minutes, dropping the voltage and consequently the output power. I had four pairs of 18650s with a four-cell charger, that probably would have given me enough juice to run continuously for at least a couple of hours, but having a lot of batteries is pretty key to running this radio on FT-8.

Also - the quarter-inch aluminum sheet on the bottom of the radio that heats up fast - really fast - too hot to touch in about 10 minutes of calling CQ. Initially I had to shut down the radio to let it cool until I hit upon the idea of laying it on a damp hotel room washcloth to soak up the heat and replacing it every 20 minutes or so. For anyone eyeing this radio for POTA or portable use, figuring out a cooling solution for the base is important to avoid damage, but the washcloth idea is always a solution.

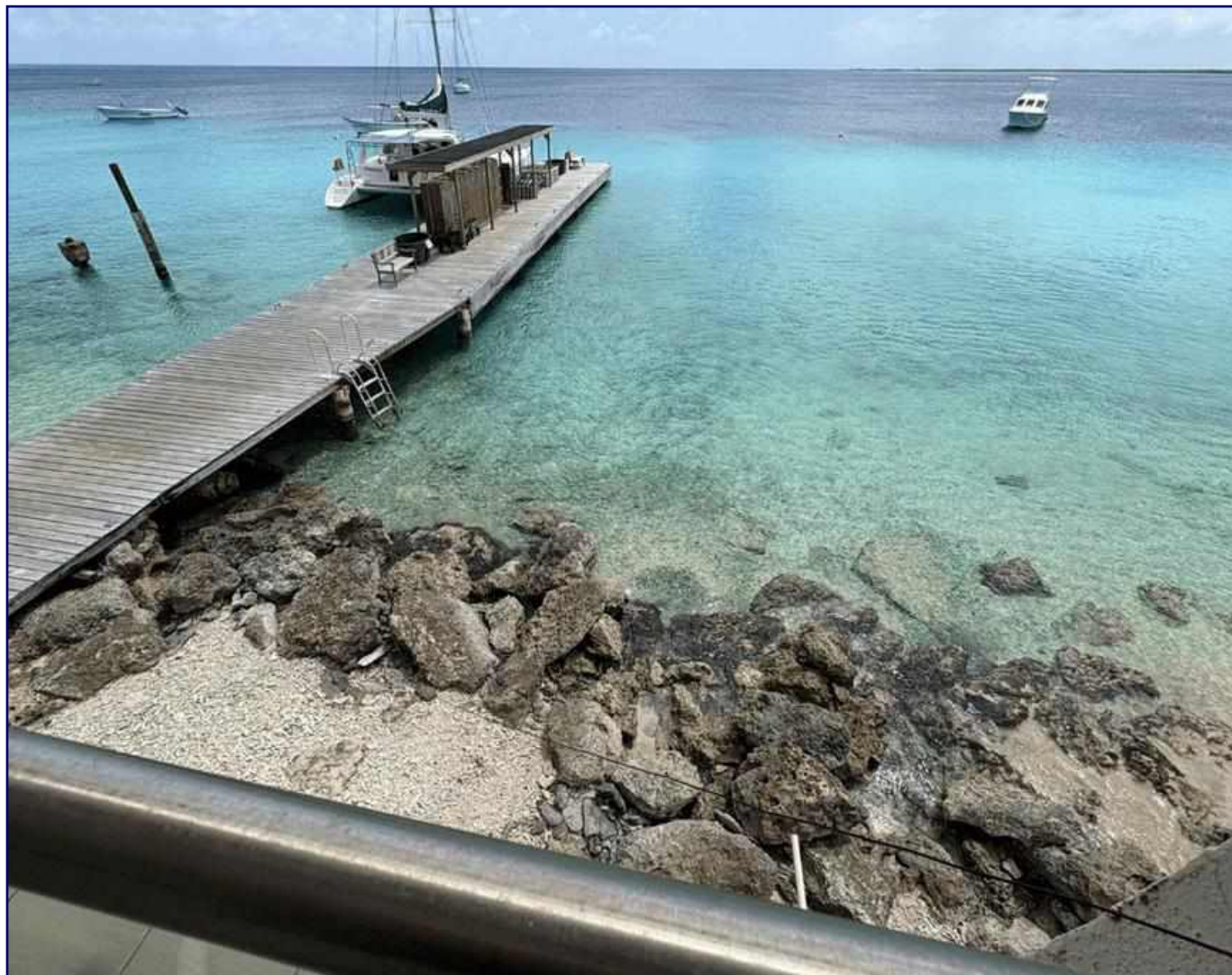
Conclusion

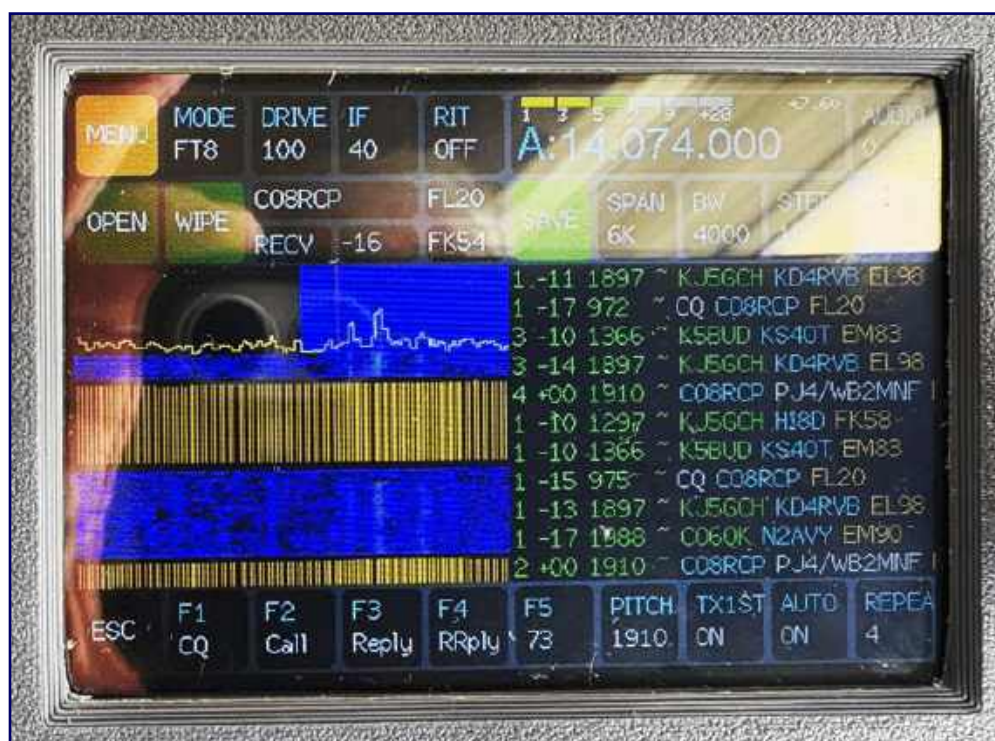
I'm calling this a "successful failure" - the gear setup sailed through TSA and hotel checks, and I reached stations globally with a temporary radio, tuner, and antenna. The failure? No QSOs thanks to the FT-8 protocol quirk in this radio and not the setup itself. Moving forward, I'm keen to take this radio on other dive trips - places like Belize and Barbados, where U.S. reciprocity doesn't apply, meaning I'd need local callsigns to avoid this headache. For reciprocal countries, I'll have to apply for local licenses upfront to dodge the issue. In the meantime at home I may actually try a little portable HF operation since it's so easy to pack this little guy up and take it somewhere. If you're looking for an inexpensive QRP HF radio check this out - just use it within the US!

Equipment and Costs :

- **zBitx Radio** : ~\$200 (direct from HF Signals, not Amazon).
- **18650 Rechargeable Batteries (Yuntunele, 4 sets of 2)** : \$39.56 (Amazon, \$9.89/set).
- **20Pcs Clip-on Ferrite Ring Core RFI EMI Noise Suppressor Cable Clips (FeFu)** : \$9.99 (Amazon).
- **QRP Z-Match Manual Antenna Tuner (MUSIKKEN)** : \$43.99 (Amazon).
- **1:49 Balun HF Shortwave Antenna with 63-foot Wire (WALFRONT)** : \$55.19 (Amazon).
- **XRDS-RF BNC Cables (6FT and 12FT)** : \$27.98 (\$11.99 + \$15.99, Amazon).
- **Total Estimated Cost** : ~\$376.71 - \$386.71 (including potential shipping, verified via Amazon order history).









The Education Connection

By Chris Prioli AD2CS - chris@ad2cs.com
www.ad2cs.com



August 2025

Normally, this would be a very short column simply stating that the Education Committee is on its annual summer hiatus. However, this year, we actually had a two-day group build program that we just completed. These sessions went very well. On the first date, 12 July, the group assembled and tested the attenuators that we have made an integral part of the completed project. Let me back up a bit...

The build project was, of course, our (seemingly) annual occurrence of the Attenuated Fox Hunt Tape Measure Yagi antenna build. I had planned for twelve attendees, and we ultimately filled all twelve seats.

The attenuator is the Fox Hunt Attenuator version 7 from **Third Planet Solar**. **John Clements KC9ON** is the brain and body behind this attenuator. John has, once again, made his kits available to us in a bulk purchase at a discounted price, which is what makes it possible for us to include the attenuator in our build project. John has been a great supporter of GCARC's educational activities, and I expect to continue our relationship in the future.

All attendees at the 12 July session successfully completed the build of their attenuators, and each and every attenuator tested as being fully operational. We used an oscilloscope to visualize the operation of the oscillator within each attenuator. While some of the attendees may have struggled a little bit with the soldering, it all worked out in the end. That brings us to the second session, held at the Clubhouse on 19 July.

At the outset, this would be a more confusing build, mostly because of the lengths of the boom and the elements, with a dozen or so people all gathered around the conference table in the Clubhouse. That having been said, it must be noted that we had all of the materials pre-cut for the participants, so least there was no real measuring or cutting to do.

The build progressed at a good pace, and all but one participant left with a completed antenna. Unfortunately, I had forgotten to bring the necessary crimping tool, so I was unable to assemble the custom cable necessary for each participant to attach a radio to the antenna. Instead, I was left with the need to make up those cables at home and then getting them to the builders. So much for trying to get it all right!

Moving on to another topic, it appears that the Fall 2025 Ham Exam Preparation Class (Session X) will finally include an Amateur Extra class, as I now have one registration on file, and I have heard from four other people who claim that they want to attend. You folks know who you are... so please register for the class as soon as possible so that I can plan properly for the Fall session.

Registrations can be completed on the Club website at <https://gloucestercountyarac.weebly.com/license-classes.html>.

That's it for now...See you next month!

GCARC VE Team : 2025 License Exam Monthly Summary

	Technician Class		General Class		Amateur Extra Class	
	Monthly	YTD	Monthly	YTD	Monthly	YTD
January	0	0	0	0	0	0
February	2	2	0	0	1	1
March	1	3	2	2	0	1
April	0	3	0	2	1	2
May	1	4	1	3	1	3
June	4	8	3	6	0	3
July	3	11	1	7	0	3
August						
September						
October						
November						
December						

17th Annual 13 Colonies Special Event

JULY 1ST - 7TH 2025

★ K2A/NY

★ K2B/VA

★ K2C/RI

★ K2D/CT

★ K2E/DE

★ K2F/MD

★ K2G/GA



LIBERTY TREE

AN EPICURE TO GOD

1776

K2H/MA ★

K2I/NJ ★

K2J/NC ★

K2K/NH ★

K2L/SC ★

K2M/PA ★

QSL



GB13COL



QSL



TM13COL

THIS CERTIFICATE CERTIFIES THAT ARS: WA2IBZ HAS PARTICIPATED IN THIS ON - AIR AMATEUR RADIO EVENT HONORING THE ORIGINAL THIRTEEN COLONY STATES, OUR INDEPENDENCE, & OUR ACTIVE MILITARY / VETERANS. 

THIS YEAR'S EVENT HONORS KEN VILLONE (KU2US), WHO CREATED THE 13 COLONIES SPECIAL EVENT IN 2009



CLEAN SWEEP



US MILITARY VET



ALL DIGITAL



ku2us
Event Manager 2009 - 2024



WM3PEN



13
CONTACTS



Tuesday Afternoon Net @ 1200 Hours



Net Control Stations :

Steve Farney W2SEF; Rich Subers W2RHS;
Greg Ciraula K3GC; & Jeff Garth WB2ZBN

147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

Here is the schedule for the upcoming weeks

Greg Ciraula K3GC : August 5, 2025
Steve Farney W2SEF : August 12, 2025
Rich Subers W2RHS : August 19, 2025
Jeff Garth WB2ZBN : August 26, 2025

Greg Ciraula K3GC : September 2, 2025
Steve Farney W2SEF : September 9, 2025
Rich Subers W2RHS : September 16, 2025
Jeff Garth WB2ZBN : September 23, 2025
Steve Farney W2SEF : September 30, 2025

If you would like to be a Net Control Station for this net, please contact Steve Farney W2SEF



Thursday Night Rag Chew Net @ 2000 Hours



Net Control Stations :

Mary Delemarre W2TDS; Gary Mirkin WA3SVW;
Steve Farney W2SEF; & Jeff Garth WB2ZBN

147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

Here is the schedule for the upcoming weeks :

Steve Farney W2SEF : August 7, 2025
Mary Delemarre W2TDS : August 14, 2025
Gary Mirkin WA3SVW : August 21, 2025
Steve Farney W2SEF : August 28, 2025

If you would like to be a Net Control Station for this net, please contact Jeff Garth WB2ZBN



The Old Barney Amateur Radio Club (<https://obarc.org>) will be operating W2T from the Tucker's Island Lighthouse (USA911) in the Tuckerton Seaport Museum in Tuckerton NJ on August 9 from about 1300-2000 UTC for National Lighthouse Weekend.

Activity mostly on 40 and 20 SSB and FT8.

QSL via N2OO.

Ron Fish KX1W
ARRL Southern New Jersey Section Manager



Gloucester County Skywarn Net

The Gloucester County Skywarn Net is held every Sunday @ 1930 Hours on the 147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

All Are Welcome To Participate

Net Control Stations : Charlie Wahl KC2STO ; Steve Broomhead KB2RTZ; & Jeff Garth WB2ZBN



Gloucester County ARES Net

The Gloucester County ARES Net is held every Sunday @ 2000 Hours on the 147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

All are welcome to participate

Net Control Stations :

Steve Farney W2SEF; Bob Keogh KD2NEC; Karl Frank W2KBF; Al Arrison KB2AYU;
Gary Mirkin WA3SVW; Greg Ciraula K3GC; & Todd Woodward KD2ESH

Steve Farney W2SEF : August 3, 2025

Todd Woodward KD2ESH : August 10, 2025

Steve Farney W2SEF : August 17, 2025

Greg Ciraula K3GC : August 24, 2025

Bob Keogh KD2NEC : August 31, 2025

Anyone who is interested in joining the Gloucester County ARES Team, is invited to contact
Bob Keogh at KD2NEC @ QSL.NET

Current Website Updates : Go to this page to find out the latest changes & updates on our W2MMD Website

<https://gloucestercountyarcs.weebly.com/current-website-updates.html>



ARRL Learning Center

<https://learn.arrl.org>

Discover how to make Amateur Radio your own.

Online courses from the ARRL Learning Center provide ARRL members with additional instruction and training for getting on the air, emergency communications, and electronics and technology

Monday & Thursday Night 40 Meter Net @ 1930 Hours

7.170 MHz (Plus or Minus 5 to 10 kHz)

NCS : Jim Clark KA2OSV



At The Repair Bench...

A monthly column describing a recent repair bench event.

By Chris Prioli AD2CS - chris@ad2cs.com - www.ad2cs.com

Kenwood TS-480SAT - August 2025

For quite a long while, the GCARC Remote HF Station actually sat idle most of the time, and when it did see use, it was generally at output levels of 35 watts or less, as it was customarily in use in conjunction with the Elecraft KPA-1500 RF amplifier, which has a maximum input power of about 35 to 40 watts. Recently, some additional users have been set up on the radio system. These users have a general tendency not to use the KPA-1500 and instead to utilize the higher output power capabilities of the TS-480SAT (Figure 1), often pushing it to its full 100-watt output.

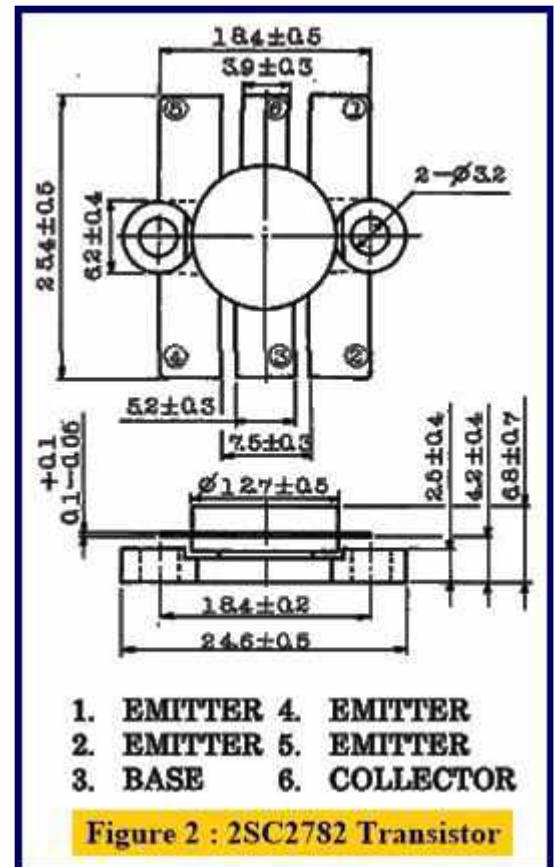


Figure 1 - Kenwood TS-480SAT

The radio lives in a steel cage in the HF room at the W2MMD Clubhouse. Its only cooling is by the random movement of air in the room. Most of the time, the room is unattended, meaning that there is nothing to cause any air movement in that room. In such a situation, the only movement of air is that which is caused by the convective movement due to the radiated heat of the radio and its ancillary components. As a result, the radio has a strong likelihood of overheating with extended high-power use. A common end result of such a situation is the failure of the radio's final power amplifier transistors. Such was the case with our radio.

Preliminary output power testing showed that the output power never exceeded about fifty to sixty percent of the rated power, topping out between fifty and sixty watts, as indicated by the radio's front panel power meter. Bench testing at my shop with the Bird 43 meter showed that the output power was actually right at 51 watts, of course well below rated output.

I then did some thermal testing and some voltage spot checks. One of the transistors in the power amplifier (PA) stage of this radio is a 2SC3421 transistor in a TO-126 package, shown as Q3 and used to control the bias applied to the final amplifier transistor pair. The final amplifiers are a pair of 2SC27872 flange-mount transistors, which have six connecting leaves. The pinout of this transistor, shown at Figure 2, is rather unusual, though it is actually fairly common for power amplifier transistors used in modern amateur radio transceivers.



At The Repair Bench - Continued on page 22

The four outermost leaves are all connected to the emitter, while the narrower of the two center leaves is the collector leaf and its opposite leaf is the base terminal. These transistors are designated Q4 and Q5 in the TS-480SAT.

The voltage testing showed the base and the emitter of the Q3 bias transistor to both be at the same voltage of 0.69VDC. The schematic calls for the emitter to be at 0.73VDC while the base should be at 1.41VDC. I suspected that this transistor was shorted, and so I removed it for out-of-circuit testing. That testing validated the suspicion; the transistor was indeed shorted. Moving on to the finals, while the voltages at Q4 were nearly normal, the voltages at Q5 were not, with the base showing 0VDC, the same as the emitter, which is held at chassis ground potential. Furthermore, while working, this transistor was completely cold, while its mate (Q4) showed temperatures over 85°C. This transistor too was shorted, so I decided to replace the finals as a pair. I ordered in the 2SC2782 replacement transistors, and I ordered the 2SC3421 bias transistor at the same time, together with a pair of MA-27B varistors, which we will discuss next.

The finals and the bias transistor are temperature-compensated through the use of specialized varistor diodes that are thermally responsive. In each case, an MA-27B varistor is physically placed across and in contact with the upper surface of the transistor body. The diode is then encased in thermally-conductive paste designed to ensure that the temperature of the transistor is carried into the diode. The diode is then electrically placed in a controlling and compensating circuit that adjusts transistor voltages based on temperature. It is important that these diodes be checked for functionality and installed back in place against the transistors that they are meant to control at the time of any replacement of the transistors. Curiously, these diodes were marketed by Matsushita, their original manufacturer, under the trade name “*Stabistor diode*”, a hint at their intended purpose in stabilizing the operating voltages of the circuit under the control of these devices.

Transistor replacement was fairly straight-forward, with the only difficulty being the not-so-easy removal of the solder from the existing transistors. It was evident that both finals and the bias transistor had been replaced at some point, because the soldering on those components was clearly not factory work. However, when the work was done, it was done with lead-free solder, thus making removal more difficult. In such a situation, it is best to simply dilute the lead-free solder with some leaded solder, and then remove that solder a little bit at a time, repeating the dilution process until all of the solder has been successfully removed.

The 2SC2782 transistors require a special approach to removal, as they use sheet metal leaves as their contact elements. The process here involves removing as much solder as is possible, and then using the tip of a hobby knife blade to gently lift a corner of the leaf while applying heat to it. Once one corner has been lifted, grip the corner with a pair of needle-nose pliers or a hemostat, and then continue gently pulling on the leaf while applying additional heat. Be patient. Eventually, the leaf will lift free of the PCB pad with no damage to the PCB or to the transistor. Repeat this process on each of the transistor leaves in turn. It helps a bit to remove the mounting screws from the transistor as a first step in the process. Doing so reduces the level of transistor heat conduction to the chassis, which will make the removal process easier.

Contrary to the removal process, it is important to install and tighten the transistor mounting screws prior to attempting to solder the leaves to the PCB. The idea is to ensure proper alignment of the transistor with its solder pads while installing the screws.

Post-repair, the radio called for what is known as a transmit alignment. This is a long and tedious process that consists of numerous steps, which must all be done in the correct sequence. The alignment process also requires the removal of three coaxial interconnect cables and replacement thereof with longer cables, removal and replacement of a flat ribbon cable with a longer cable, and the temporary insertion of a service plug into the DATA port on the front of the radio.

The longer cables are to maintain inter-board connectivity while the boards are removed from the radio and separated to provide access for test equipment connections to various points on the boards. It should be noted that these are so-called “service items” that were once available for purchase from Kenwood. Now, all that Kenwood still offers are the three coaxial cables, at a cost of about fourteen dollars each. The ribbon cable can be substituted with a slightly longer similar cable available from Digikey at a modest three-dollar cost.

The service plug is nothing more than a 6-pin mini-DIN plug with pins 3 and 6 shorted to each other. This plug is inserted into the DATA port during a specific power-up process of the radio, which places the radio into its built-in **service mode**.

The full alignment includes a total of seventy-nine steps, one of which is a write step (step #76) that stores all of the newly adjusted values to an EEPROM, which then governs the operation of the radio after a normal power-up.

Quite a bit of specialized test equipment is needed for the process. I used my Motorola R2001A Communications Service Analyzer to do the job, as it has all of the necessary equipment built in. This alignment process is not for the faint of heart nor for the inexperienced technician. It is best left to someone who has done this kind of work before.

The Kenwood service manual for the TS-480 provides all of the necessary instructions, but the process is laborious and requires attention to fine detail to get it right. Even at that, I found myself second-guessing myself and wondering if I did get it all right the first time, especially when the radio seemed not to operate correctly when placed back into the remote station cage. However, as has been since learned, another properly-functioning radio is now having the exact same operational symptoms in that cage, so I believe that my alignment is vindicated.

This was a repair that started out as an easy one, and then turned into quite an ordeal – after the actual mechanical portion of the repair was complete! Lesson to be learned here is to research what all is involved before jumping into a job – it might just turn out to be more than you really want to tackle, or maybe more than that for which you are prepared as regards skills, knowledge, and bench equipment.

QST de W1AW
ARRL Bulletin 8 ARLB008
From ARRL Headquarters
Newington, CT, July 18, 2025
To all radio amateurs

SB QST ARL ARLB008 Changes in the ARRL Atlantic Division

Martin "Marty" Newingham AG3I, of Greensburg, Pennsylvania, has been appointed Vice Director of the ARRL Atlantic Division, effective July 15, 2025. Newingham will serve the remainder of a term that expires December 31, 2026. He replaces Martin J. "Marty" Pittinger KB3MXM, who resigned from the position in April. Newingham is an ARRL Life Member and a Gold-level contributor to the ARRL Diamond Club.

The ARRL Atlantic Division is comprised of the ARRL Sections of Delaware, Eastern Pennsylvania, Maryland-DC, Northern New York, Southern New Jersey, Western New York, and Western Pennsylvania.

ARRL The National Association for Amateur Radio is governed by an all-volunteer Board of Directors. Elections are held for five of the 15 ARRL Divisions each year, for terms of 3 years.



Amateur Radio Emergency Services - August 2025

Resources - News - Updates

By Bob Keogh KD2NEC - kd2nec@qsl.net
Gloucester County Emergency Coordinator



Amateur Radio Volunteers Serving During Texas Floods

July 09, 2025

Volunteer amateur radio operators serving in the ARRL The National Association for Amateur Radio® (ARRL®) Amateur Radio Emergency Service® (ARES®) are embedded with local served agencies in the areas of central Texas affected by devastating floods.

The needs and assignments have been changing, but ARES volunteers are stepping up to the dynamic needs of their communities. "This is a very fluid situation. It changes by the hour," said ARRL South Texas Section District 7 Emergency Coordinator Terry Jones, K5LGV.

The trained ham radio operators were activated starting on Friday, July 4, 2025. Radio amateurs are providing communications capabilities to agencies whose primary systems were damaged in the flooding event or where they suffer poor connectivity due to the terrain.

ARES members helped the American Red Cross with setup of a reunification shelter in response to the floods. Ten hams were assigned to search-and-rescue teams.

Dozens of health and welfare messages were passed by ham radio operators who provided a critical link when phone lines were overwhelmed. "A lot of this is tied to circuit overload preventing folks from making direct contact with family members in the area," said Kevin McCoy, KF5FUZ.

During the flooding event and subsequent search and recovery missions, ARES members have been deployed to serve many different counties, including hard-hit Kerr and Kendall Counties. Mutual aid has been offered between several surrounding ARRL sections.

When All Else Fails®

Amateur radio operators use their training, skills, and equipment to provide communications during emergencies When All Else Fails®. Hams serve our communities when storms or other disasters damage critical communication infrastructure, including cell towers, and wired and wireless networks. Amateur radio can function completely independently of the internet and phone systems. An amateur radio station can be set up almost anywhere in minutes. Hams can quickly raise a wire antenna in a tree or on a mast, connect it to a radio and power source, and communicate effectively with others.

The Amateur Radio Emergency Service (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes.

ARES Membership Requirements

Every licensed amateur, regardless of membership in ARRL or any other local or national organization is eligible to apply for membership in ARES. Training may be required or desired to participate fully in ARES. Please inquire at the local level for specific information. Because ARES is an Amateur Radio program, only licensed radio amateurs are eligible for membership. The possession of emergency-powered equipment is desirable, but is not a requirement for membership.

Club Member DMR IDs

Club Member	DMR ID
W2MMD Clubhouse	3198604
Michael Andrescavage N2ICV	3134044
Lance Appel KE2UC	3200487
Joshua Boylan KE2FSC	3216140
Steven Broomhead KB2RTZ	3218247
Alex Calabrese WA2ADS	3100583
Chuck Capasso WB2PGE	3169781
Matthew Carango N3QB	3169432
Todd Cecilio KA2YNT	3169458
Anthony Cerami N2OAC	3202759
Mark Clark N3QMJ	3102110
Norm Coltri K2NRC	3183851
Holden Correia-Fisher KD2JPV	3104911
Mike Covalski N2MMC	3134855
Walter Coward WX2E	3166863
Bob Demola KD2GFL	3134319
Doug Dersch KD2VQA	3193630
Thomas Distelcamp Sr KC2GYC	3110869
Glenn Dougherty N2YIO	3161836
Adam Duncan W3DUN	3202691
Herb Dyer KT2Y	3134907
Harry Elwell AD5TT	3128498
Misael Fernandez Jr KE2EBL	3214756
James Foster W3JNF	3142117
Karl Frank W2KBF	3146716
Glen Guenther KE2BUO	3202079
Melissa Guenther KE2BWZ	3202496
Deirdre Anne Hebert AD2GQ (AB1ST)	3133330
Gary Hewitt N2WHV	3134654
Chuck Lanard KD2EIB	3134298

Club Member	DMR ID
Darren Malone KD2ALQ	3215227
Gary Mirkin WA3SVW	3165494
John Murrow KD2NHK	1134122
John Newman WB4YLM	3213273
Phil Nunzio WA3RGY	3134336
John O'Connell K2QA	3110610
Robert Pantazes W2ARP	3157208
Sheldon Parker K2MEN	3214037
Jonathan Pearce WB2MNF	3163415
Michael Pecorini K2MRP	3132996
Michael Pentimall KC3VTF	3203601
John Price III KD2QYC	3123583
Chris Prioli AD2CS	3195449
Michael Resnick N2WOQ	3215856
Frank Romeo N3PUU	3134935
Len Rust III W2LJR	3186225
Len Rust IV K2LJR	3196243
Dave Sheppard W2PAX	3112666
Cory Sickles WA3UVV	1142052
James Simeone KC2AOF	3134848
Stan Slachetka WA2JRZ	3213904
Court Smith KD2SPJ	3186243
Jackson Snyder AI2D	3164371
Rich Subers W2RHS	3204316
Brett Waller K2BKW (KC2UXQ)	3134261
Matt Wilson K2MFW	3134607
Bill Wood KD2OSJ	3197459
Jim Wright N2GXJ	3215168
John Zaruba Jr K2ZA	3134331
New Entries As Of 07/17/2025	

For more information, DMR links, and W2LJR's DMR presentations, go to :
<https://gloucestercountync.weebly.com/dmr.html>

DMR Configuration Sequence

1. Obtain and Configure DMR ID :

- <https://www.radioid.net>

2. Download Contact List :

- <http://www.dmrcontacts.com>

3. Identify Repeater or Hotspot :

- <https://www.repeaterbook.com>

4. Define Talk Groups

- Numerical ID
- Text Name

<https://brandmeister.network/?page=talkgroups>

5. Create Channel

- Select Number
- Assign Name
- Select DMR ID
- Assign Frequency
 - ♦ Transmit
 - ♦ Receive
 - ♦ Bandwidth
 - ♦ Power
 - ♦ DMR Mode (Simplex/Repeater)
 - ♦ TX Permit (Channel Free)

- Assign Talk Group
- Assign Color Code
 - ♦ Agreed Upon with Other Users
- Assign Time Slot
- Agreed Upon with Other Users

6. Create Zone

7. Add Channels to Zones

8. Configure Features

9. Upload Code Plug

10. Upload Contact List

If you recently changed your callsign, contact idteam@dmr-marc.net to have your DMR ID transferred to your new callsign.



Jersey String Band Report for August 2025

By Glenn Dougherty N2YIO

On July 22nd we were on the Ocean City Boardwalk for the third time this year. The first time was on July 1st in a very short performance due to some real stormy weather coming in. Our second time was better which was on July 3rd where we had big crowds and we met up with another String Band coming in from 6th Street. A good time was had by everyone.

We will be back on the boardwalk on August 28th starting at 7 pm along with another band. We will be starting from 6th Street and meeting the other band at 10th. Both bands will play a few songs and march back to our starting points by 9 pm hopefully. On July 23rd the band met with our arranger to go over the first 2 minutes of our New Years Day 2026 music. It should be a pretty good show with our fifties theme. They are also in the process of having the costumes for 2026 made and hopefully they should be completed by November. The band will march 14th in the New Years Day 2026 parade.

We will do have a lot of parades coming up this fall. I will have more on them in September. If you get a chance, check out The Jersey String Band Podcast and The Philadelphia String Band Association Sessions Podcast both can be found on YouTube.



Gloucester County Amateur Radio Club
YouTube Channel

<https://www.youtube.com/@W2MMD>

Your Antenna Performance In 3D : 2025 HamFest Seminar : 9:00 am

By Jim Wright N2GXJ

Ever wish you could see your antenna performance in 3D, to get a feel of what to expect for various choices specific to your situation? I know I did.

Like you, I'm bewildered sometimes by the variety and shapes and types of antenna choices available, and the sometimes conflicting claims made by those who suggest them. End-feds, dipoles, OCF's, loops, verticals, beams, and more, just to name a few - ask a fellow ham for opinions on what's best for your given situation and what you'll get back is often inconsistent, and generic without comparisons, rather than specific to your situation. And that's a problem.

What I was looking for was a tool that would allow me a way to independently compare how various antenna choices and configurations might be expected to perform specific to my situation, before investing time and money and effort in the best choices for me to try in real life. Perhaps having such a tool could help you too?

Do such tools exist? It turns out that yes, they do. And at least one of them includes a feature that lets you fly around to see your antenna's radiation pattern in 3D, not just in Alt/Az, an ability which I have really come to appreciate. As a bonus, this tool comes with a built-in "optimizer", useful for helping to evaluate how an existing antenna might be tweaked to make it even better. I hope to demonstrate both during the live presentation at this year's HamFest.

Still not appreciating how such a tool might help you? Try this. Ever wonder what would happen to your antenna performance if you were to raise or lower its height another quarter wavelength beyond where it is now above ground? You might be surprised. Ever wonder about the effects of bending the ends of your antenna to make it smaller. Take the case of trying to fit a 66 foot long 40 meter dipole in the attic of your house. How much of the ends can you bend, and does it matter in what directions you bend? If bending the ends, do you know offhand if it is better to bend the ends of such a dipole in opposite directions, so that when looking down on it from above, in opposite directions so that it looks more like the letter "Z", or in the same direction, so that it looks like the bracket symbol "]"? Does it matter?

Questions like these can all be answered using these tools before ever having to head out into the yard, or crawl up into a hot attic again to give it a try. By attending this live presentation and demonstration at this year's HamFest, attendees can expect to come away with a greater understanding and appreciation of what visualizing your antenna pattern in 3D can offer you towards gaining a better understanding of antenna options in your configuration, and what to expect from them.

Hope to see you there!

For more information, go to : <https://hamfest.w2mmd.org>



Club Merchandise from the K2ZA Workshop
Contact John Zaruba Jr K2ZA at k2za@icloud.com
Go To : <https://gloucestercountync.weebly.com/club-merchandise.html>



Converting DMR Contact And Channel Lists For Different Radios Using AI

By Jonathan Pearce WB2MNF

I recently added a Retevis H1 DMR radio to my collection of DMR radios primarily because it has the capability to act as a Single-Frequency Repeater (SFR) as described in my July Crosstalk article and I wanted to check out that capability. But the challenge with any DMR radio is populating the many different sets of data (channels, contacts, talk groups, etc.) that are used in these radios, which I hoped to extract from the complete set of data in my Anytone 878 radio and transfer to the H1 doing the least amount of manual data mapping possible. Rather than typing data or wrestling with text editors or Excel, I used the xAI program “Grok” as an AI assistant to automate the conversion, demonstrating a faster, more accurate approach for DMR data management. This article outlines the process, introducing hams to AI-assisted conversion as an alternative to labor-intensive methods.

The Starting Point : A Sample Contact List

First I created a sample contact list for the H1 using the Customer Programming Software (CPS), adding a few representative entries with fields like Contacts Alias, Call Type, Call ID, City, Province, and Country in the H1 data format. This served as the target format for the H1 CPS. The source for the data was the large contact list from my Anytone 878, containing 200,000 contacts with fields like No., Radio ID, Callsign, Name, City, State, Country, Remarks, Call Type, and Call Alert.

I exported the sample list from the H1 into a CSV file and did the same CSV export process with the Anytone file, then pasted both CSV files into Grok, instructing it to map the Anytone data into the H1 format. This took several iterations as described below but ultimately saved me many hours of frustrating Excel fiddling.

Iterating the Contact List Conversion

The assistant initially mapped fields from the Anytone contact list to the H1 format :

- **Contacts Alias** → **Callsign**
- **Call Type** → **Call Type**
- **Call ID** → **Radio ID**
- **City** → **City**
- **Province** → **State**
- **Country** → **Country**

Note that it did this on its own - I gave it no instructions for the mapping. It processed the first 50 lines as a test, removing No., Name, Remarks, and Call Alert, and deduplicated entries by Callsign and Radio ID (e.g., VA3AMO at 1023009 and 1023010), yielding 43 records in a new CSV file. I imported that file into the H1 CPS but it was rejected due to field name mismatches (e.g., Contact Alias vs. Contacts Alias). I simply pasted that error message into Grok and it corrected it, ensuring all six fields were present, and the final 43-record contact list was successfully imported. That part was pretty easy.

Customizing Naming Conventions

I also had Grok make some field name changes along the way. The H1’s name fields are shorter than those on the Anytone, which Grok successfully truncated but then some ended up being difficult to understand. So in addition to the mapping instructions I gave it instructions to change some of the data field names, truncating Anytone’s longer names (e.g., MNF HS NorthAmer became unclear).

Converting DMR Contact & Channel Lists Using AI - Continued on page 29

I instructed the assistant to use shorter, readable names like the following :

- **MNF HS [suffix] → HS [suffix]** (e.g., HS NorthAmer)
- **MNF Tac [suffix] → MNF T[suffix]** (e.g., MNF T310)
- **HilltownBu → Htn**
- **Whitemarsh → Wlm**
- **Honeybrook → Hbk**
- **KD2LNB → LNB**

Channel List Conversion Challenges

I then converted an Anytone channel list to the H1 format, creating a new channel list with 74 channels. Using the H1 CPS, I added representative entries to ensure the exported format matched the H1's import requirements. Initial issues included :

- **TX Frequencies** : The Grok assistant copied identical RX/TX frequencies, assuming simplex for hotspots, which is incorrect for my hotspot. I clarified that "HS" channels that relate to my duplex hotspot should be duplex (RX 442.50000 MHz, TX 447.50000 MHz for the Club hotspot), and repeaters needed offsets (+5 MHz for UHF, +0.6 MHz for VHF, e.g., LNB Parrott 440.10625/445.10625). These commands were given in normal text, along the lines of "If the channel name contains an HS treat it as a repeater".
- **Timeout Errors** : Two channels had TX Time-out Time[s] set to "Inverse" (corrected to "Infinite" for HazDE Parrot, MNF T311). Here Grok apparently made a typo that it had to correct.
- **Permissions** : I instructed Grok to set all Tx Permission to "Channel Free" for consistent behavior so that the radio wouldn't transmit if the channel was already busy.
- **Duplicates** : I also had several channels that were duplicates, which I had it remove, simply by telling it to remove all duplicate data records that were identical except for the name.

This worked after a few iterations - again simply pasting the H1's import error messages into Grok and letting it figure out what was wrong.

Adding Roaming Channels

Roaming channels are used in some DMR radios to find a repeater that's in range. When asked to "Roam" the DMR radio will "ping" each of the DMR roaming channels (silently for the users - not like kerchunking an analog repeater) and report on the first one that responds. This list needs one entry for each local repeater, which somewhat duplicates the contacts list but needs (a) to include only repeaters and (b) deduplicates the repeater contact list after removing the talk groups. I figured that I could have Grok extract this data from the Channels file on the Anytone radio that I had already uploaded so I created a few entries in the H1's roaming channels CPS, exported that to a CSV file, dropped it into Grok and told it to convert the Channels file to that format using the above additional instructions to remove the duplicated fields that resulted from the channel file having multiple talk group entries for the same repeater. That took a few more iterations to get cleaned up but ended up working well too.

Using AI for Ham-Related Tasks

Throughout this process the instructions given to Grok were in normal human-type sentences, like "Any time there's an HS in the channel name change the TX field to be 5 MHz above the RX field". When there were import errors in the H1's CPS I simply pasted that error message into Grok and let it interpret it.

Most of the time it figured out what it did wrong and fixed itself.

Using AI like this required a lot of recalibration of thinking on my part - my initial reaction in many cases was to perform a manual step that I quickly realized I could ask Grok to do. The ultimate example of that was my decision to write this article about this process, which I then realized I could have Grok do itself because it already knew all of the steps that it had taken throughout the process. So most of this article was Grok-written with some edits by me. I'm finding an increasing number of ham-related tasks that can use AI, so I hope that others are exploring this great opportunity as well.



Tuesday, August 5, 2025

POLICE • COMMUNITY PARTNERSHIPS

San Max Special Event : Aug 1-Aug 31, 0000Z-2359Z, 4A2MAX, Diamond, MEXICO. San Max XE Operators. 7.220, 14.180, 21.275, 28.440. Certificate & QSL. 4A2MAX San Max Special Event, 5914 San Bernardo Ave, Suite 4-135, Laredo, TX 78041-2506. This is an annual event that radio amateurs in Mexico use for the patron saint celebrations of Saint Maximilian Maria Kolbe, patron saint of radio amateurs.

<https://www.qrz.com/db/4A2MAX>



Maximilian Kolbe, SP3RN
Patron Saint of Amateur Radio
Operators

Saint Maximilian Maria Kolbe

(January 8, 1894 - August 14, 1941) was a Polish Conventual Franciscan friar who volunteered to die in place of a stranger in the German death camp of Auschwitz, located in German-occupied Poland during World War II. He was active in promoting the veneration of the Immaculate Virgin Mary, founding and supervising the monastery of Niepokalanów near Warsaw, **operating an amateur radio station (SP3RN)**, and founding or running several other organizations and publications. Kolbe was canonized on October 10, 1982 by Pope John Paul II, and declared a Martyr of charity. He is the **patron saint of amateur radio operators**, drug addicts, political prisoners, families, journalists, prisoners, and the pro-life movement. John Paul II declared him "The Patron Saint of Our Difficult Century".

2024-2028 Element 4 Amateur Extra Class License Question Quiz

This month we finish up with Subelement E3 Radio Wave Propagation (3 exam questions - 3 groups).
(Answers on Last Page)

E3C01

What is the cause of short-term radio blackouts?

- A. Coronal mass ejections
- B. Sunspots on the solar equator
- C. North-oriented interplanetary magnetic field
- D. Solar flares

E3C02

What is indicated by a rising A-index or K-index?

- A. Increasing disturbance of the geomagnetic field
- B. Decreasing disturbance of the geomagnetic field
- C. Higher levels of solar UV radiation
- D. An increase in the critical frequency

E3C03

Which of the following signal paths is most likely to experience high levels of absorption when the A-index or K-index is elevated?

- A. Transequatorial
- B. Through the auroral oval
- C. Sporadic-E
- D. NVIS

E3C04

What does the value of Bz (B sub z) represent?

- A. Geomagnetic field stability
- B. Critical frequency for vertical transmissions
- C. North-south strength of the interplanetary magnetic field
- D. Duration of long-delayed echoes

E3C05

What orientation of Bz (B sub z) increases the likelihood that charged particles from the Sun will cause disturbed conditions?

- A. Southward
- B. Northward
- C. Eastward
- D. Westward

E3C06

How does the VHF/UHF radio horizon compare to the geographic horizon?

- A. It is approximately 15 percent farther
- B. It is approximately 20 percent nearer
- C. It is approximately 50 percent farther
- D. They are approximately the same

Element 4 Amateur Extra Class Quiz - Continued on page 32

E3C07

Which of the following indicates the greatest solar flare intensity?

- A. Class A
- B. Class Z
- C. Class M
- D. Class X

E3C08

Which of the following is the space-weather term for an extreme geomagnetic storm?

- A. B9
- B. X5
- C. M9
- D. G5

E3C09

What type of data is reported by amateur radio propagation reporting networks?

- A. Solar flux
- B. Electric field intensity
- C. Magnetic declination
- D. Digital-mode and CW signals

E3C10

What does the 304A solar parameter measure?

- A. The ratio of X-ray flux to radio flux, correlated to sunspot number
- B. UV emissions at 304 angstroms, correlated to the solar flux index
- C. The solar wind velocity at an angle of 304 degrees from the solar equator, correlated to geomagnetic storms
- D. The solar emission at 304 GHz, correlated to X-ray flare levels

E3C11

What does VOACAP software model?

- A. AC voltage and impedance
- B. VHF radio propagation
- C. HF propagation
- D. AC current and impedance

E3C12

Which of the following is indicated by a sudden rise in radio background noise across a large portion of the HF spectrum?

- A. A temperature inversion has occurred
- B. A coronal mass ejection impact or a solar flare has occurred
- C. Transequatorial propagation on 6 meters is likely
- D. Long-path propagation on the higher HF bands is likely

***“The big thing about being in a club and
being a “Ham” is to help each other
when there is a need ”
- W2SEF***



Volunteer Monitor Program Report - May 2025

The Volunteer Monitor (VM) Program is a joint initiative between ARRL and the FCC to enhance compliance in the Amateur Radio Service. This is the May 2025 activity report of the VM Program.

- Technician operators in Arizona and New Mexico received advisories concerning 15-meter FT8 operation. Technicians are authorized to operate only CW on that band.
- An advisory was issued to a Technician-class operator in Kansas concerning FT8 operation on 40 meters. Technicians have only CW privileges on that band.
- A Technician-class operator in Nebraska was issued an advisory for operating on 20-meter FT8, a band on which Technicians have no privileges.
- Advisory notices concerning improper wide signals were issued to stations in Washington, North Carolina, and Texas. Section 97.307(a) of the Commission's rules states, "No amateur station transmission shall occupy more bandwidth than necessary for the information rate and emission type being transmitted, in accordance with good amateur practice."
- A commendation was issued to an operator in Illinois for his work with the local emergency management agency on the W9ANL repeater on 146.970 MHz, assisting in efforts to restore damaged power lines and remove downed trees.
- Two operators in New Hampshire received commendations for building a system of 2-meter and 70-centimeter nodes across mountainous terrain in New Hampshire. Before their installation, all communications had to be relayed.
- A station in Illinois was issued an advisory for retransmitting communications from a repeater to 146.520 MHz without identification.
- An operator in Virginia was issued an advisory notice for transmissions on 3.933 MHz after being asked to cease interference on top of existing communications and continuing the interference with unsolicited comments.
- There was one FCC meeting.

The totals for April 2025 monitoring were 1,550 hours on HF frequencies, and 1,953 hours on VHF frequencies and above, for a total of 3,503 hours.

Thanks to Volunteer Monitor Program Administrator Riley Hollingsworth, K4ZDH



Full Sturgeon Moon - Saturday, August 9, 2025 @ 0355 Hours.

Lake sturgeon, found in the Great Lakes and Lake Champlain, as well as in several rivers, were once much more abundant. These large (some more than 6 feet long!) migratory fish were an important staple for Native American peoples living in the area. Captain Jonathan Carver came across this term for the lunar month during his travels in the 1760s. Flying Up Moon is a Cree term describing the time when young birds are ready to fly. Corn Moon (Algonquin, Ojibwe), Harvest Moon (Dakota), and Ricing Moon (Anishinaabe) signify the time to gather mature crops. The Assiniboine people named this period Black Cherries Moon, referring to when chokecherries were ripe. The Tlingit called this time of season the Mountain Shadows Moon.

Old Farmer's Almanac - www.almanac.com



Bike MS City To Shore Ride 2025 - Update July 8, 2025

Greetings and Salutations to All,

First and Foremost - I would like give a very HEART FELT THANK YOU to all of the 2024 Ride volunteers. As always, the event can not be done without you, your dedication, and professionalism. It is an honor to be one of you.

Now some bad news, it seems that unfortunately, you are stuck with me for at least another year. Not so bad, you shouldn't have to endure the begging and pleading from prior years (but we will get into that at a later date).

There will definitely be changes this year from last, but hopefully they will be good changes, and most of you should be pleased.

One of the biggest changes is that we are expanding our SAG operations by probably at least an additional 5 to 10 SAGs. But these will be single SAGs of a SUV, but again, more details in the near future.

I bring this up, because a SAG position is a very challenging position. Attached to this email is our **2024 Event Communications Route Support.pdf** and **SAG Communicator 2024-07-25.pdf** from last year, which explains all positions. I ask that you read over the description of the SAG position, and kindly get back to us as soon as possible so that we can discuss the position and it's responsibilities if you are interested.

Sign up forms will be available very soon, and as soon as I have them, I will send out an email with the link.

I hope to see all of you from last year, and years gone by, but also I am excited to see the new folks coming out to the event.

I thank you all, I appreciate you all, and look forward to working with as many of you as possible this year.

With all my Respect,
Joe D (KC2SFB)
With Much Appreciation
EvComm (n3mssevcomm@gmail.com)
Message Phone : (609.795.0909)

Editor's Note : Updated information and the 2 PDFs that Joe mentioned above can be downloaded from the w2mmd.org "Bike MS" webpage at : <https://gloucestercountyarcc.weebly.com/bike-ms.html>



Bike MS : City To Shore Ride 2025
September 27 - 28, 2025

Bike MS : Bike To The Bay (Delaware) 2024
October 4, 2025

N3MSS Amateur Radio Communications
Bike MS Volunteers : www.n3mss.org

Field Day 2025 - 20 Meter Phone Team

By Chris Prioli, AD2CS - chris@ad2cs.com - www.ad2cs.com

The GCARC 2025 Field Day event was quite successful despite the moderate heat, some light rain, some over-night fog, and the threat of thunderstorms. While the thunderstorms never materialized to any extent that affected our operation, we were nonetheless prepared with a safety plan in place should the worst have happened in that regard.

The 20 Meter Phone Team consisted of the following Club members :

- **Diane Amico W2WHD**
- **Josh Boylan KE2FSC**
- **Dan Caguiat KV2N**
- **Kerri Caguiat K2CAG**
- **Jon Davidson KE2DYD**
- **Lee Hafele WA2LH**
- **Earl Moore KD2NCH**
- **Frank Parsinitz KD2GSY**
- **Mike Pentimall KC3VTF**
- **Mike Resnick N2WOQ**
- **Randy Testa KC3VCC**

While not all of the team members actually operated on-air, the contributions of every team member were invaluable, and our success would not have been possible if any one of this group of willing volunteers had not been there.

In addition to the listed team members, our team effort would have been in vain if not for the tremendous help offered by :

- **Mary Delemarre W2TDS**
- **John O'Connell K2QA**
- **Jon Pearce WB2MNF**
- **Frank Romeo N3PUU**

Mary was extremely generous in her donation to the team in the form of a tent and some furnishings. John provided our reflector mast, its cap, and its guy rings (more on the reflector mast later). Jon's Honda generator was made available for our use. Frank provided advice, technical expertise, and generator management. All of these contributions were necessary in order for our team to be successful.

During Field Day 2024, the 20-meter phone team fought a long and hard uphill battle against overpowering signals in the 20-meter CW segment, which made it all but impossible to hear any incoming SSB communications. In spite of that problem, the team managed to make about 120 QSO's. That problem led us to become innovative on our approach to Field Day 2025. A few months back, **Frank Romeo N3PUU** brought an article to my attention, in the belief that the article may have contained a potential solution to the CW QRM problem. After reading the article (whose source remained unknown to me until I began writing this article, but is now known to be **Nelson Soltenberger KA2C**, as found on www.ka2c.com) and doing some more research, I decided to attempt to build a filter that would notch out the CW segment of the 20-meter band, while offering minimal insertion loss to the phone segment of that band. That filter is the subject of a separate article, but it was an unknown entity prior to 1400 hrs local time on Saturday 28 June. At that time, we all went on the air, and the filter got its first real test.

Field Day 2025 20M Phone Team - Continued on page 36

I had tested the filter on the bench, and it had tuned up extremely well, but I was still unsure about just how well it might perform under real-world Field Day operating conditions. Suffice it to say that the filter was completely successful in blocking the 20-meter CW QRM that had plagued us last year. When combined with a 20-meter band-pass filter (**Morgan Systems model M-407** - www.surgestop.com), we had the ideal filtering situation - only the phone segment of the 20-meter band would get through to our radio with any real signal strength.

We started out the day operating my Icom IC-718, which worked fairly well - better, I believe than the Icom IC-7300 had done last year. We stayed with the IC-718 until sundown, when I switched over to my Icom IC-746 PRO. It is my firm belief that the IC-746 PRO will be my primary Field Day radio for future events. In any case, the radio was supported by my MFJ-941E(K) Versa-Tuner II manual antenna tuner, which worked well. The reason that the MFJ-941E model number is appended by a “K” is because this tuner was built from a kit - the only tuner kit ever offered by MFJ, to the best of my knowledge.

Power was provided by one of my TekPower TP50SW 50-ampere power supply units. For grounding, we used a two-foot length of 1/2" copper pipe with ground wires leading off to each piece of radio equipment on the table. That copper pipe was in turn bonded to my Morgan Systems M302U lightning arrestor, which was bolted to a length of perforated steel angle stock that had been cut off at a point on one end. That end had been driven about thirty-six inches into the native soil of the site, just outside the tent entrance. Of course, the RG-213 coaxial cable feedline passed through the lightning arrestor as well as through the tuner and the two filter units.

Our rather unorthodox antenna was a setup suggested by **Frank Romeo N3PUU**. In our installation, we raised a standard Hustler 5BTV vertical antenna. We installed a radial plate on which twenty-nine (of the thirty-two available) radial attachment points each had a fifteen-foot radial wire attached, leaving a “three-wire” gap at the center of one edge of the radial plate. The radial wires were of stranded 12AWG wire, each equipped with an ounce of lead weight at its far end to help hold the wires in place on the grass. The plate-attached end of each wire had a 1/4" ring terminal crimped and soldered in place, and then sealed with heat-shrink tubing.

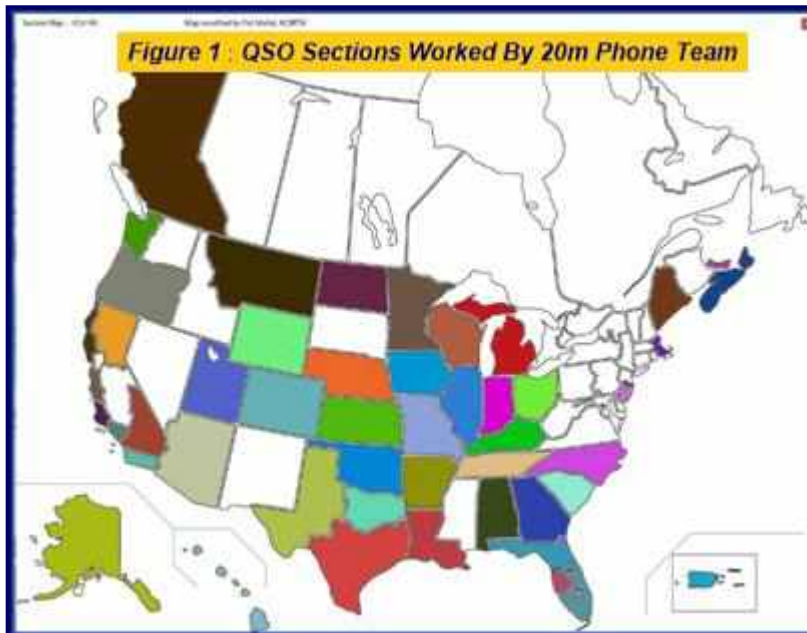
The arrangement of radial wires with the “three-wire” gap formed a “V”-shaped notch in the radial field. This notching of the radial field forms a null in the field, which then provides some directivity to the antenna’s radiation pattern, instead of the usual omni-directional pattern of a standard vertical antenna. This directivity was enhanced by a device that Frank had suggested - a vertical wire reflector placed at a fixed distance (0.2λ at 14.250MHz) from the base of the Hustler. This was accomplished by raising and guying a twenty-four foot tall mast at a point almost fourteen feet from the base of the antenna. To this mast was attached an additional radial wire, connected to the center of the “three-wire” gap in the radial plate, and extending up the full twenty-four foot height of the mast. This vertical radial wire forms an antenna reflector that enhances the directivity already begun by the radial field null. The result was an antenna with a pattern that strongly favored a direction 180° opposite that of the position of the reflector mast with respect to the antenna. In our case, the reflector was directly east of the antenna, causing our directional vertical antenna to strongly favor points west of the antenna’s location.

So... the question that begs being asked is “how did the antenna perform?” Well... all that I really have to go by is the results, as I never took the time to measure the radiation field with an RF field strength meter... but nevertheless, I believe that the results are fairly conclusive.

During the period when the entire country was on the air, we made absolutely zero QSO’s with any stations in FCC Areas 1, 2, and 3. In other words, no contact at all with stations to the east of our antenna location, nor with stations within about 450 miles to the west. All told, we accomplished a total of 123 QSO’s. It wasn’t until many stations dropped off the 20-meter band that we were able to score our first New England QSO, which just so happened to be with a special-event station **W1M** in Maine at 0809 hrs local time on Sunday.

Field Day 2025 20M Phone Team - Continued on page 37

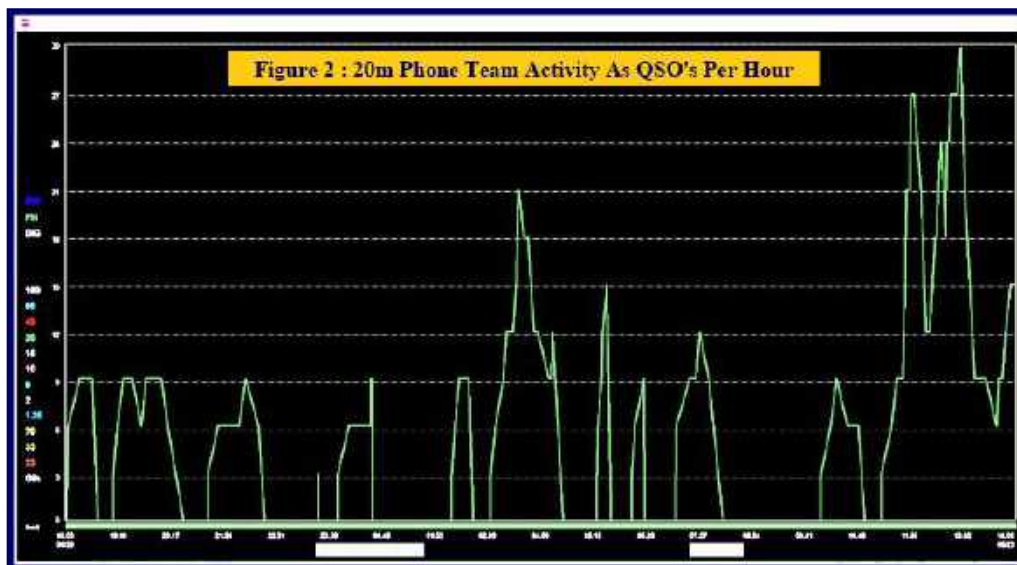
Prior to the **W1M** QSO, we successfully worked station **VY2PEI** on Prince Edward Island (Canada) at 0754 hrs local, and station **VE1LD** in Nova Scotia (Canada) at 0800 hrs local. Shortly after reaching **W1M**, we also worked **W1KJ** in Maine at 0827 hrs local, **K1RK** in Eastern Massachusetts at 0859 hrs local, and then, apparently via ground wave, a special event station **N2A** in our own Section of SNJ at 0920 hrs local. Throughout the entire morning, we could hear another special event station **N1M** quite well, but we could never reach him to work him. However, having heard his QSO's with other stations, it was clear that he was operating from within the EMA section.



All of this points out the basic directionality of our antenna system, with *much* better performance to the west than to the east. At one point, we actually made contact with a station in the Netherlands, but he was not working Field Day and had no interest in logging a DX QSO with us. However, we *did* work stations in both Alaska and Hawaii, as well as most of the western USA and even into British Columbia in Canada. In addition, we were quite successful into the deep south and even to Puerto Rico.

Did our activity really and truly reflect the operation of the antenna system? I believe that the operating statistics will clearly bear out the antenna report. The complete Operating Statistics for the GCARC 2025 20-meter Phone Team can be found in **Appendix I** at the end of this article.

Refer to the map at **Figure 1** and the activity graph at **Figure 2** for some more detail as to the patterns of coverage and active periods, respectively. This data was pulled from the available statistics area of the **N3FJP ARRL Field Day Contest Log** software, as were the statistics data provided in the appendix.



All things considered, we did the best that we could, given the relatively poor band conditions, and we did it without any CW QRM at all this year. That fact leads me to the belief that we, as a Club, should probably seriously consider constructing additional similar filters for the other bands on which we typically operate both CW and Phone teams. This concept is discussed further in my article that covers the construction and application of the filter.

Thank you to all of the 20-meter Phone team members who gave so unselfishly of their time to help us reach Field Day success this year. In addition, I extend my thanks to those supporters who were not directly members of the 20-meter Phone team but nonetheless helped us to reach our goal.

Appendix I - Operating Statistics

W2MMD's Contest Summary Report for GCARC ARRL-FD 2025 - 20m Phone
Created by N3FJP's ARRL Field Day Contest Log
Version 6.6.9 www.n3fjp.com

Total Contacts = 123

Total Points = 123

Operating Period: 2025/06/28 18:03 - 2025/06/29 14:09

Total op time (breaks > 30 min deducted): 14:51:43

Total op time (breaks > 60 min deducted): 16:43:25

Avg Qs/Hr (breaks > 30 min deducted): 8.3

Total Contacts by Band and Mode:

Band	CW	Phone	Dig	Total	%
----	--	-----	---	-----	---
20	0	123	0	123	100
	--	-----	---	-----	---
Total	0	123	0	123	100

Total Contacts by Section:

			ME	2	2	SC	2	2
			MI	3	2	SCV	3	2
Section	Total	%	MN	4	3	SDG	2	2
-----	-----	---	MO	5	4	SF	2	2
AK	1	1	MT	2	2	SFL	3	2
AL	5	4	NC	6	5	SNJ	1	1
AR	3	2	ND	1	1	STX	3	2
AZ	2	2	NE	1	1	SV	1	1
BC	1	1	NFL	3	2	TN	2	2
CO	4	3	NS	1	1	UT	3	2
EMA	1	1	NTX	7	6	WCF	4	3
GA	5	4	OH	2	2	WI	5	4
IA	4	3	OK	3	2	WTX	1	1
IL	3	2	OR	1	1	WWA	1	1
IN	5	4	ORG	2	2	WY	2	2
KS	2	2	PAC	1	1	Total Sections = 49		
KY	2	2	PE	1	1			
LA	1	1	PR	2	2			
LAX	1	1	SB	1	1			

Total Contacts by State \ Prov:

State	Total	%
-----	-----	---
	2	2
AK	1	1
AL	5	4
AR	3	2
AZ	2	2
BC	1	1
CA	12	10
CO	4	3
FL	10	8
GA	5	4
HI	1	1
IA	4	3
IL	3	2
IN	5	4
KS	2	2
KY	2	2
LA	1	1
MA	1	1
ME	2	2
MI	3	2
MN	4	3
MO	5	4
MT	2	2
NC	6	5
ND	1	1
NE	1	1
NJ	1	1
NS	1	1
OH	2	2
OK	2	2
OR	1	1
PE	1	1
SC	2	2
TN	2	2
TX	12	10
UT	3	2
WA	1	1
WI	5	4
WY	2	2
Total States = 38		

Total Contacts by Country:

Country	Total	%
Canada	3	2
Hawaii	1	1
Puerto Rico	2	2
USA	117	95
Total Countries = 4		

Total DX Miles = 9,336
(QS0s in USA not counted)

Average miles per DX QS0 = 1,556

Average bearing to the entities
worked in each continent.
(QS0s in USA not counted)

NA = 71
OC = 282

Total Contacts by Continent:

Continent	Total	%
-----	-----	---
NA	122	99
OC	1	1
Total Continents = 2		

Total Contacts by CQ Zone:

CQ Zone	Total	%
-----	-----	---
03	23	19
04	62	50
05	35	28
08	2	2
31	1	1
Total = 5		

Total Contacts by Initials:

Initials	Total	%
-----	-----	---
CPP	72	59
DA	7	6
DEC	3	2
JGB	5	4
KC	11	9
LH	11	9
MFR	9	7
RJT	5	4
Total =	8	

Total Contacts by Operator:

Operator	Total	%
-----	-----	---
AD2CS	72	59
K2CAG	11	9
K2FSC	5	4
KC3VCC	5	4
KV2N	3	2
N2WOQ	9	7
W2WHD	7	6
WA2LH	11	9
Total =	8	

From The Help Desk By Chris Prioli AD2CS

A new column coming in September 2025. This will be a series of related articles that will each take a look at some facets of radio selection, installation, or operation as suggested by actual questions received from Club members or other amateur operators.

Gloucester County Amateur Radio Club Elmers

We are still looking for some more Club Elmers. If you would to add your name to the Elmer's List, send your specialty to w2mmdgcarc@gmail.com. Here is what we have so far :

- Tony Starr K3TS : Antenna Construction; Contesting; CW Help and Training
- Ken Bozarth KN2U : Antennas
- Jeff Welsh KD2AZI : Boat Anchor Repair & Operation; Raspberry Pi; Arduino; Python; POTA; Mobile Installation & Operating
- Karl Frank W2KBF : Digital Messaging (FLDIGI, WinLink)
- Lenny Rust W2LJR : DMR Radios & Programming
- Ron Block NR2B : Lightning Protection & Grounding
- Chris Prioli AD2CS : Kit Building; Antenna Building; Radio Programming; PC and Electronic Troubleshooting; Ham Radio Licensing & Studying
- John Zaruba Jr K2ZA : Yaesu System Fusion Radio Programming; POTA; SOTA; CW Learning & Operating
- Jerry Barnish K2EAB : Radio Astronomy
- Mike Thompson KG4JYA : Radio Astronomy; VARA (HF and FM); WinLink
- Steve Farney W2SEF : WSJT-X; FT-8; LoTW; TQSL; Grid Square
- Carl Wittig N2CRW : Audacity® Audio Editor
- Gary Mirkin WA3SVW : FLDIGI; MMSSTV
- Jon Pearce WB2MNF : Satellite Communications
- Frank Romeo N3PUU : Toilet Installer; Jack-Of-All Trades - Master Of None
- John Hill W2HUV : Local & Remote W2MMD HF Station Operation; Training & Support
- Dave Sheppard W2PAX : National Traffic System
- Bob Pantazes W2ARP : How To Properly Manage QSL Cards

W1AW Contacts With W2MMD During Field Day

By Jim Wright N2GXJ

After field day this year, the ARRL mentioned that W1AW, the Hiram Percy Maxim Memorial Station at ARRL Headquarters in Newington Connecticut, was active for the event. Did we make any contacts with them? Sure enough, yes we did! Checking our logs showed we'd logged two contacts between W1AW running 6F in CT and us as W2MMD running 9A in SNJ during field day this year, once on 10 meters, once on 80 meters. Both contacts show confirmed at Logbook of the World. How about that!

		New Query					
		2 Records Shown (1-2)					
		Sorted by QSO Date (0.010127 seconds elapsed)					
	Call sign	Worked	Date/Time	Band	Mode	Freq	QSL
Details	W2MMD	W1AW	2025-06-28 23:17:45	80M	FT8	3.57410	UNITED STATES OF AMERICA
Details	W2MMD	W1AW	2025-06-28 19:45:15	10M	FT8	28.07623	UNITED STATES OF AMERICA

Our Contacts with W1AW during Field Day 2025 Show Confirmed at LoTW

Some Electronic QSL Cards Received From Field Day 2025





I am pleased to announce that **Dave Sheppard W2PAX**, is being appointed as the Southern New Jersey Section Traffic Manager (SNJ-STM). Dave resides in SFL Section, but is a former NJ resident and is a member of the Gloucester County ARC. He is well-versed in traffic handling and is also STM in SFL.

Dave and I will be setting up training classes in traffic handling. If you are interested in learning about handling amateur traffic, please drop me a note. Eventually, when we have a pool of traffic handlers, Dave will transition his role to a local person.



Yes, traffic handling has a role in modern communications. Cell towers can go down...if they do, what's left? Amateur Radio! Remember that the letters RR in ARRL stand for Radio Relay...what the League was founded on.

Please welcome Dave back home to SNJ Section!

Ron Fish KX1W

ARRL Southern New Jersey Section Manager

7th Annual ARRL SNJ Section Convention and 47th Annual HamFest Sunday, September 7, 2025 : <https://hamfest.w2mmd.org>

By Ron Block NR2B

As summer temperatures dip, our Club kicks off its annual HamFest fundraiser, the primary source of revenue supporting Club activities throughout the year. This year's event, set to open at 8:00 AM on Sunday, September 7, 2025 introduces a series of operational improvements designed to enhance visitor experience, and boost our professionalism.

The HamFest team has expanded the on-site signage, placing signs and markers from the entrance roadway through the tailgate area to guide our guests to vendor booths, forums, and special demonstrations. For the first time, covered-space vendors may now reserve and prepay for their spots, expediting entry for both sellers and attendees. For covered-space and tailgate sellers, paper placards - slipped under windshield wipers - will indicate each vehicle's destination, thus eliminating repeated queries and fostering smoother traffic flow. All vehicles without placards will be directed to general parking.



Also, for the first time, HamFest will feature a staffed **Help Desk** on **2M Simplex (146.460 MHz)**, where attendees can pose questions, relay comments, or request assistance. HamFest management personnel will monitor the channel throughout the day, offering real-time support to visitors and vendors alike.

Education remains a focal point with three 55-minute Seminars. This year, **Jim Wright N2GXJ**, will delve into **"Your Antenna Performance in 3D."** This will be followed by **Robert Famiglio K3RF**, ARRL Atlantic Division Director, who will deliver the annual **ARRL Update**. **Angela Metzger KE2DRJ**, rounds out the program with a presentation on **"STEM, Kids, and Ham Radio."**

Beyond the classrooms, weather permitting, Club President **Jonathan Pearce WB2MNF**, will lead a high-altitude balloon launch demonstration, while **Mark Gottlieb KK2L**, operates the **Special Event Station W2M**. The **American Red Cross Communications Trailer** will also be on display, showcasing emergency-response radio equipment.

ARRL SNJ Section Convention & HamFest - Continued on page 43

The **Boy Scouts of Troop 9** from West Deptford return to serve breakfast from 6:00 AM onward, fueling early-bird shoppers and participants.

Meanwhile, walk-in license examinations will be available at the W2MMD Clubhouse between 8:00 AM and 10:00 AM. Details on volunteer examiners and testing procedures are online at :

<https://veteam.w2mmd.org>



No HamFest is complete without prizes. Organizer **Jeff Welsh KD2AZI**, has secured contributions from major Amateur Radio vendors, with dozens of door prizes available and a Grand Prize of \$200 cash.

Winners must be present to win.

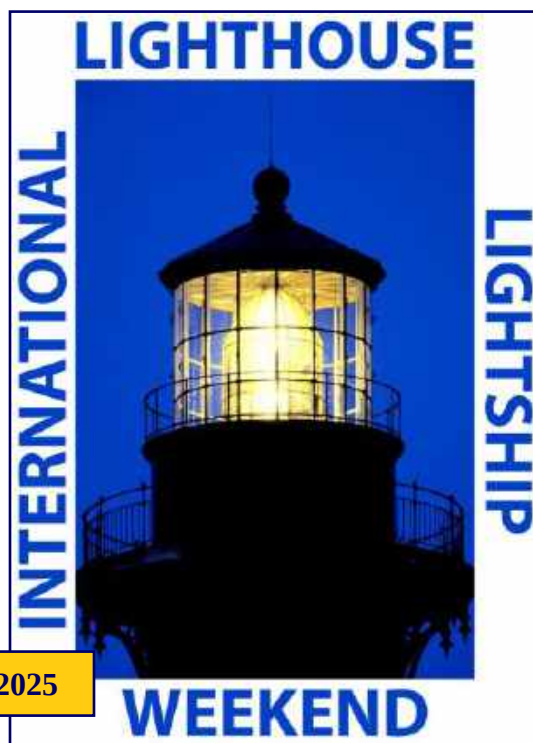
To be successful, we will need an estimated 45 volunteers for this event - more than four times the Club's average volunteer turnout. Prospective volunteers should email HamFest@W2MMD.ORG to let us know that you are interested. We will call you to discuss your role.

Gates open, rain or shine, at 8:00 AM - early arrivals around 7:30 AM can score the best bargains. Club members are encouraged to wear their Club badges to show support and foster camaraderie. Full event details, including maps and schedules, can be found at : <https://hamfest.w2mmd.org>.

As long as the weather cooperates, this will be a great day!



Sunday, August 17, 2025
www.w2zq.com



August 16 - 17, 2025

CW Notching Filter For Field Day Use

By Chris Prioli, AD2CS - chris@ad2cs.com - www.ad2cs.com

As probably everyone in the Club knows by now, the 20-meter Phone team had a terrible problem at Field Day 2024 with 20-meter CW QRM from the close-by 20-meter CW team. Of course, this was nothing new - it has been happening for many years. It is just that I found it particularly annoying, seeing as how it was my first Field Day effort either as an operator or as a band chair. I made up my mind to do something about it, so when **Frank Romeo N3PUU** sent an article to me (of unknown provenance at the time), I read it with great interest.

That article, it turns out, was written by **Nelson Sollenberger KA2C** and was published on his website www.ka2c.com as well as in various ARRL publications. Nelson, who is fortunate enough to live on a gorgeous farm just west of Chambersburg, PA, has penned several articles dealing with filters, QRM, and Field Day operations.



Figure 1 : USRX Filter Assembly

After reading several articles on the topic, I decided to emulate his Ultra-Sharp Receive Filter (**USRX Filter - Figure 1**) in a 20-meter version as a means of blocking the 20-meter CW QRM during this year's Field Day event.

The project began with first ensuring that I had a thorough understanding of just what I was going to build, what was needed for the build, and how it would work. Simply put, the filter is comprised of a three-stage series of separate filters, all tuned for the same frequency range, specifically 14.000MHz to 14.150MHz. Each separate filter stage would occupy its own compartment in an aluminum enclosure, using 700pF silver-mica capacitors to couple the RX signal from stage to stage. The individual filter stages each would consist of a solenoidal-wound air-core coil of about 4μH inductance, in series with about 31pF of capacitance. The capacitance was achieved by a combination of a 22pF fixed silver mica capacitor in parallel with a 2-18pF air gap variable capacitor.

The specific resonant frequency of the filter can be calculated using the standard equation for resonant frequency :

$$f_{RES} = 1/(2\pi\sqrt{LC})$$

Where :

f_{RES} = the resonant frequency

L = the inductance in henrys

C = the capacitance in farads

Substituting our target values for the variables in the equation, we get :

$$f_{RES} = 1/(6.28 \times \sqrt{(4 \times 10^{-6}) \times (31 \times 10^{-12})})$$

Simplifying that equation, we end up with the following :

$$f_{RES} = 1/(6.28 \times \sqrt{(124 \times 10^{-18})})$$

Or :

CW Notching Filter - Continued on page 45

$$f_{RES} = 1/(6.28 \times 0.000000011)$$

Or :

$$f_{RES} = 1/0.00000007$$

Or :

$$f_{RES} = 14,299,785\text{Hz or } 14.300\text{MHz}$$

Several factors came into play during the construction of this filter. First off was the Q of the various components used. High Q parts were highly desirable, and I did my best to source some high Q off-the-shelf NOS coils, but to no avail. I ended up having to wind my own coils and hope for the best there. I was concerned about the Q of my home-brewed coils, but it turned out that they were quite respectable. Q is determined by dividing the reactance by the resistance. For a resonant circuit, because the inductive reactance and capacitive reactance are by definition equal to each other, we can use either value in determining the Q of that resonant circuit. I wanted to start with a decent coil, though, so I set out to determine the Q of my home-brewed coils. Starting with the measured resistance of the coil, as obtained using my Ascel Electronics Æ20218 Milliohm Meter, we have a value of 0.098Ω.

That value is the DC resistance of the wire in one of my coils. Based on the published value (**Wire Resistance at Various Frequencies** - <http://ve3efc.ca/wireohms.htm>) for the DC resistance of a one-hundred-foot long 18AWG solid wire being 0.69Ω, we can calculate that the length of wire in my coil is 7.0402 feet (0.69 divided by 0.098). Using that length value and again referring to the published resistance value of that same 18AWG wire, we can extrapolate that at 14.300MHz, a 100-foot resistance would be 10.22Ω, or 0.1022Ω per foot. Finally, we multiply our length of 7.0408 feet by 0.1022Ω per foot to derive a 14.300MHz RF resistance of 0.720Ω for my coil. Remember that number...

Next, we must calculate the inductive reactance of the coil, which measured out to be 3.78μH after final trimming. Based on the 14.300MHz resonant frequency, we come up with an inductive reactance of ≈339.46Ω as follows :

$$X_L = 2\pi fL$$

Or :

$$X_L = 6.28 \times 14300000\text{Hz} \times 0.00000378\text{H}$$

Or :

$$X_L = 6.28 \times 54.054$$

Or :

$$X_L = 339.45912\Omega$$

Finally, we divide the inductive reactance of ≈339.46Ω by the resistance of 0.720Ω and we get a resulting Q factor of 471.5, or ≈472. That is a respectable value under these circumstances. In his article, **Nelson Sollenberger** stated that a one-inch diameter air-core coil of about an inch in length can achieve Q factors of about 500 to 600, so I was very happy with my calculated value and therefore with the Q of my coils.

In order to reliably wind coils with a high degree of repeatability, I decided to “invent” a system of support members for the windings. I started out by designing a 3-D printable strip that has a series of notches spaced one wire’s diameter of 0.045” apart. The wire used for the coils was a 155°C-rated enamel-coated 18AWG magnet wire. This wire, while fairly heavy at 0.045” diameter, was nonetheless quite pliable and it would wind nicely. To support the printed plastic strips, of which four were used, I designed a cylindrical core with longitudinal slots into which the notched strips would fit. I lined up the strips all flush at one end of the core and wound the wire, shifting down one notch at each full turn. The result was a coil with parallel windings that jog down a bit on one side.

After winding fifteen turns (I anticipated needing thirteen turns based on my calculations), and having left two-inch tails on each end of the coil, I secured the wire to the strips by applying hot glue along each strip, smearing it into the notches with a putty knife while the glue was still soft. Once all four strips had been glued and the glue was completely set, I simply pushed the core out from the middle of the coil, producing an air-core coil. This, of course was repeated twice to form a total of three such identical coils.

After the coils were wound, it was time to trim them to the desired inductance of between $3.5\mu\text{H}$ and $4.0\mu\text{H}$. I ended up with twelve and a half turns on each coil, yielding a final coil inductance of $3.78\mu\text{H}$. I then shortened the wire tails to about an inch long each, and removed the enamel coating from the last half-inch of each tail for soldering purposes.

I have to throw out some kudos to **Rich Subers W2RHS** first for doing all of my 3D printing, but also for suggesting the slotted core that was used to hold the notched strips for winding the coils. A simple yet ingenious idea that worked beautifully.

Each of the notched strips was printed with a series of transverse holes through the body of the strip, with the intention of using the holes for mounting the coils in place inside the filter enclosure. That was, in fact, exactly how the coils were secured to the enclosure, using a pair of Keystone 800-series single-lug terminal strips to mount each coil, securing the coil between the terminal lugs by inserting a machine screw through the terminal lugs and the notched strip, and then placing a **KEPS nut** onto the machine screw. For those who may not be familiar with the term, a **KEPS nut** is basically a standard hex nut with a captive but rotatable externally-toothed lock washer attached. The use of these nuts simplifies the assembly process and reduces the parts piece count.



An important consideration when installing the coils was that each coil was installed with the longitudinal axis of the coil in a different plane of orientation, one being mounted **horizontally along** the length of the enclosure, the second being mounted **horizontally across** the length of the enclosure, and the third being installed **vertically** on end within the enclosure (**Figure 2**). This is done so that there is minimal magnetic transfer between the three coils, as each field is then in a different plane.



Figure 2 : Working Parts Of USRX Filter

Moving on to the capacitors, it must be understood that the ideal situation had three-quarters of the filter's required capacitance being made up by the value of the fixed capacitor, with the remaining 25% coming from a variable capacitor. Nelson suggested the use of surplus Johnson air variables, and I was fortunate enough to source three of them of suitable value from **Surplus Sales of Nebraska** (<https://www.surplussales.com>). However, the capacitors purchased were of a 12-30pF value, somewhat higher than that which I needed.

Optimally, we should have the variable capacitor operating at about the center of its adjustment range in practice. Having settled on 22pF fixed capacitors, I needed about 9pF from the variable capacitors.

As a result, I modified these three capacitors by removing two of the five fixed plates (one at a time, measuring the value after each removal), resulting in variable capacitors having a 2-18pF value range. This would then ideally put the final desired value of about 9pF very close to the center of the adjustment range.



Figure 3 : Rear Panel View

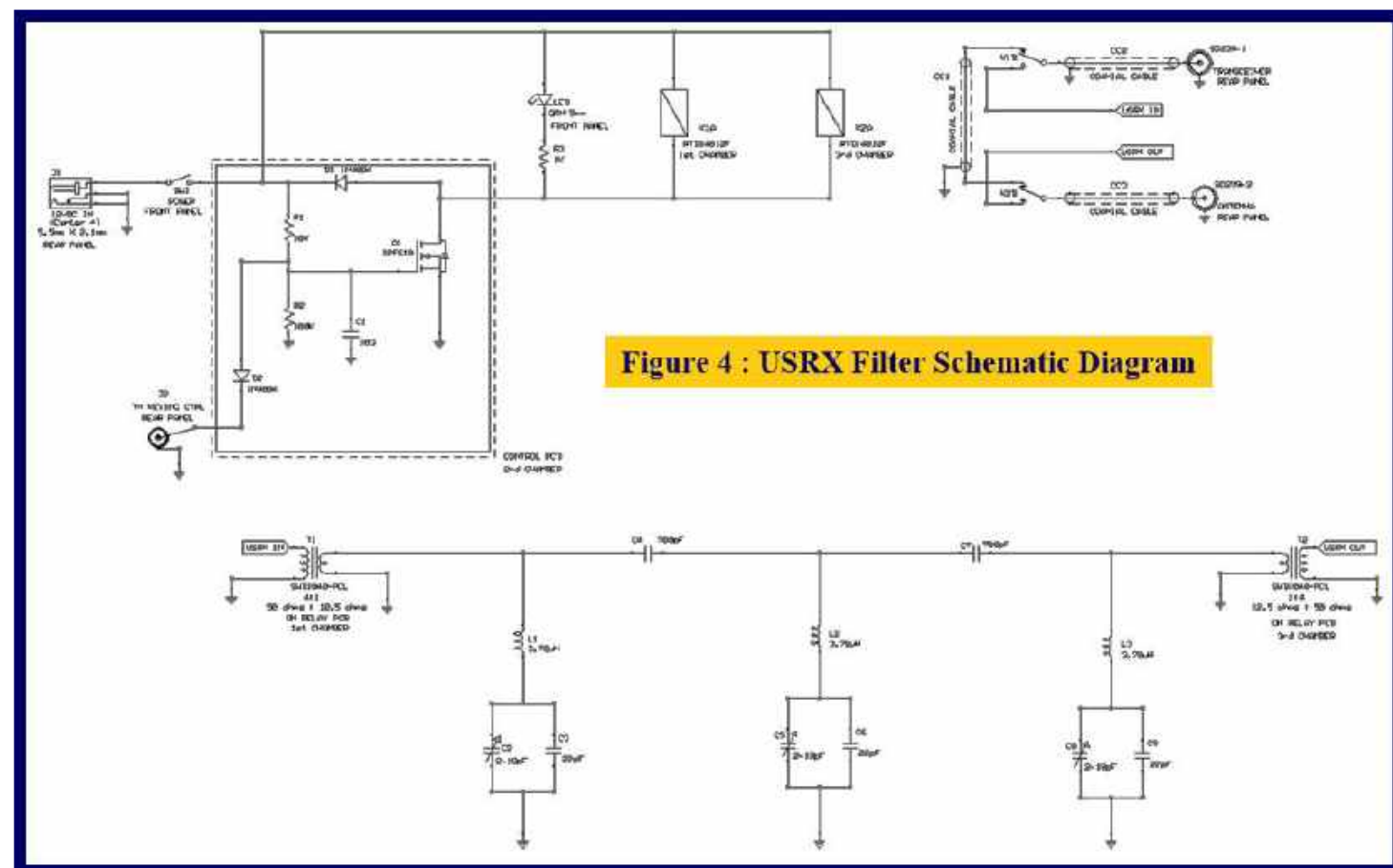


Figure 4 : USRX Filter Schematic Diagram

A schematic diagram of the filter assembly is shown in **Figure 4**. Refer to that illustration as you follow along with the upcoming discussion of the operation of the filter unit. The filter has two operating modes - **RX and BYP** - or **receive and bypass**. The BYP mode is the operational mode in use during any transmission from the transceiver. The RX mode is in use whenever the filter is switched to the RX switch position with power applied and the transceiver is in its receive mode. Note that the BYP mode is the power-off fail-safe mode. This is intended to help to prevent the transmitted RF signal from finding its way into the filter circuit.

The filter enclosure, as already mentioned, is divided into three compartments, one for each of the three filter sections. That division is accomplished by the installation of aluminum divider panels that are cut to fit snugly between the front and back walls of the enclosure, and are the full height of the interior of the enclosure.

Machine screws and **KEPS nuts** are used to secure the panels in place, as well as to secure most of the other parts and components within the filter enclosure. While sheet metal screws could have been used, and may well have been easier to install, they would certainly not have been as kind to the hands and fingers that needed to reach within and work inside the enclosure.

Each of the three compartments has a circuit board installed. In this prototypical version of the filter unit, proto-boards were used instead of having custom PCB's made. Future versions will likely have the already-designed PCB's installed. The two end compartments each have a relay board, while the center compartment contains a control board.

During BYP operation, the RF output signal from the transceiver enters the enclosure via a coaxial cable connected to the **TRANSCEIVER SO-239 connector (Figure 3)**. From there, the signal is routed on a short length of RG-58 coaxial cable to the relay board in that filter compartment. The RF output signal then passes through the normally-closed (NC) and common (COM) terminals of the relay and directly out to a transverse length of RG-58 cable, which carries the signal to the relay board in the opposite end compartment. There, the signal passes through the COM and NC terminals of the relay in that compartment, and then is passed out to the rear-panel **ANTENNA SO-239** connector and off to the transmit antenna.

Control of the filter unit is provided by the transceiver RF amplifier control port (*e.g., the **SEND port on Icom radios***), which is usually an RCA jack on the back of the transceiver, and is taken to ground when the mic is keyed. This action would often be used to key an RF amplifier to its active state for transmission. In the case of this filter unit, power-on at-rest state has the filter unit in its RX mode, with the relays on the two relay boards pulled into their active or switched state. Thus, in the RX mode, the relays are both switched "**on**" so that their COM terminals are actively connected to their normally-open (NO) terminals. This provides a receive signal path from the receive antenna into the filter unit at the **ANTENNA SO-239** connector, through the short RG-58 connecting cable and to the relay board. On the relay board, the RX signal is routed through the now-closed COM and NO terminals and out to a four-to-one step-down transformer, where the 50 Ω impedance is dropped to a more suitable 12.5 Ω for the filter circuit. From the transformer, the RX signal is routed to the three parallel filter sections via the 700pF coupling capacitors. The low end of the 20-meter signal is shunted off to ground via the filter sections, while the upper end of the band is passed on to the opposite relay board, where it passes through a reversal of the impedance-matching transformer (now a one-to-four step-up transformer), bringing the impedance back up to the 50 Ω level on its way to the relay. At the relay, the RX signal passes through the NO and COM terminals and on to the short RG-58 connecting cable, by which it is carried to the **TRANSCEIVER SO-239** connector and thence on to the transceiver.

The filter mode is indicated by a green LED on the filter front panel. An illuminated LED indicates that the filter is in its RX mode, and the LED should go out as soon as the mic is keyed, switching it to the BYP mode instead.

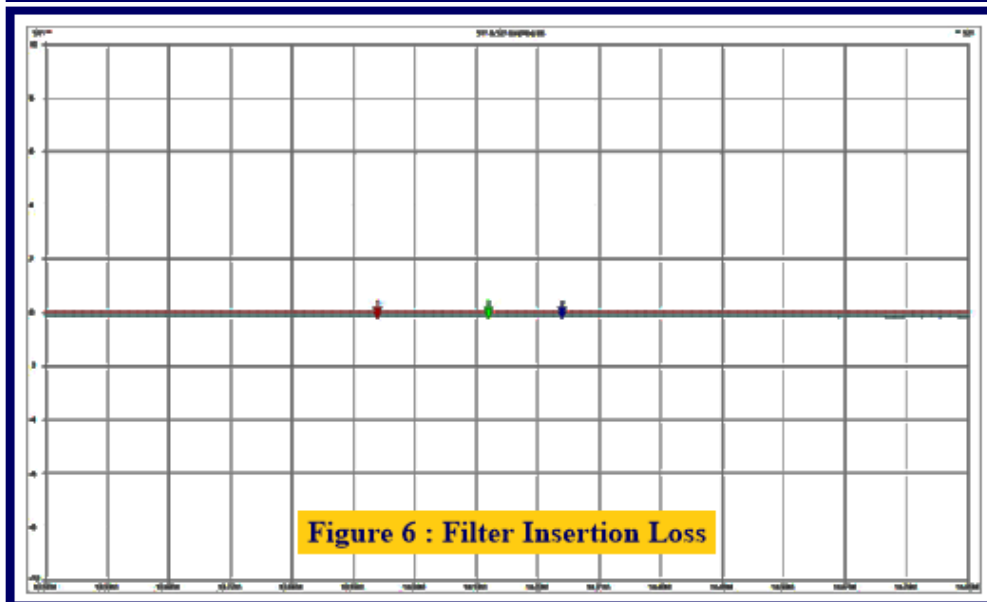
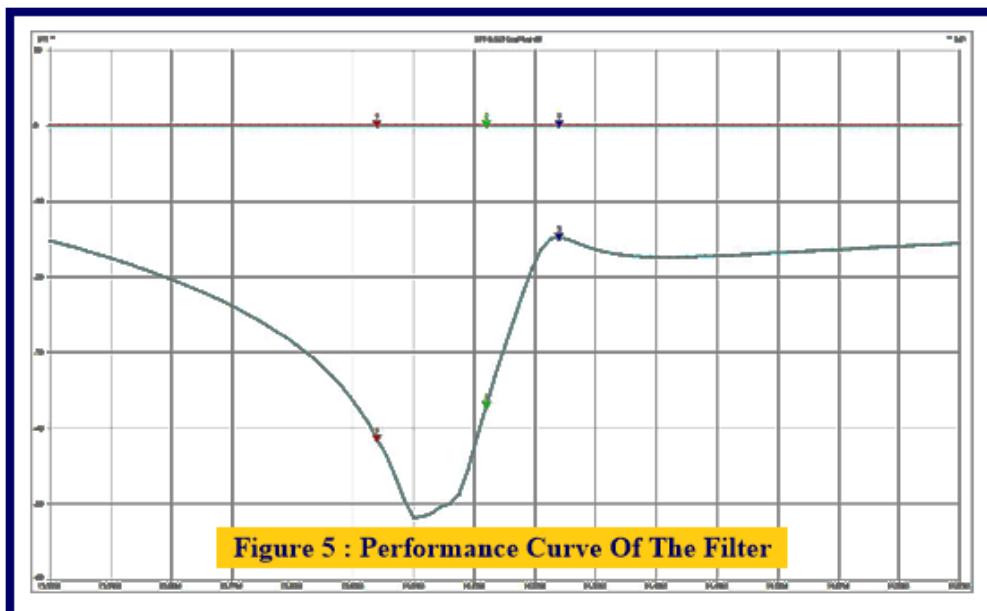
The transformers used in this build are the closest thing that I could find to the specific model recommended in **Nelson Sollenberger's** article. His recommendation was for the CoilCraft WB4-6L transformer, of which there was zero stock worldwide. Instead, I sourced the CoilCraft SWB1040-PCL, a miniature transformer with almost identical characteristics and the same physical size and form factor. I could see no reason why it should not work in the circuit, and it turns out that I was correct.

A few words about these transformers are called for here and now. These devices - both part numbers - are rated at a mere 250mW and are therefore ill-suited for handling the transmit power of the transceiver at any level at all.

Therefore, the filter design was such that the default or power-off condition would route the transmit power directly through the filter unit on a bypassing coaxial cable, basically carrying the signal from the **TRANSCIVER SO-239** connector to the **ANTENNA SO-239**, without ever going near the transformers. However, this depends upon proper operation of the Potter and Brumfield RTD14012F relays. These relays, while having a nominal twelve-volt coil, operate quite well when powered from the ubiquitous 13.8VDC so prevalent on the ham bench today. While the engage time is a bit slower than is the release time - eight milliseconds for engage compared to six milliseconds for release - the relay timing is still quick enough to do the job.

Now that you have seen an explanation of the filter's basic operation, it should become quite evident that this filter unit is capable of eliminating the CW QRM about which I was so concerned. Tuning of the filter unit was done using a NanoVNA H4 that was properly calibrated and set with a stimulus range of 13.5MHz to 14.85MHz, thus encompassing the entire 20-meter band. The illustration at **Figure 5** depicts the performance curve of the tuned filter. As can be seen, the final attenuation of the CW segment of the band was more than 50dB. In practice, it worked quite well, though I was not thrilled with the resultant attenuation across the remainder of the band. However, that attenuation did not stop the team from making a good number of QSO's. The **Figure 6** illustration depicts the performance in the transmit mode, where the insertion loss was on the order of $\approx 100\text{m dB}$ (or 0.1dB). That loss was the result of the signal passing through the relay contacts, which is unavoidable under the circumstances. In both **Figure 5** and **Figure 6**, the frequencies marked are approximately 14.0MHz, 14.15MHz, and 14.25MHz respectively.

It is my recommendation that the Club seriously consider building a series of these filter units for the other operational bands utilized on Field Day, specifically 80-meters, 40-meters, 15-meters, 10-meters, and even 6-meters. In the 40m and 80m versions, the coils utilized would be toroidal coils, while the other bands would need solenoidal air-core coils as used in the 20-meter version. If this filter worked so well for me on 20-meters, it should perform equally well on the other bands.



Gloucester County Amateur Radio Club

General Membership Meeting Minutes

Wednesday, July 02, 2025



Meeting opened @ 1900 Hours by President Jon Pearce WB2MNF with the Pledge of Allegiance to the Flag

Attendance :

- In-person : 39
- Via Zoom : 9

Visitors :

- **Bob Bagietsky** via Zoom

New Members :

- **Denver Edwards KE2GFG**, Elmer, NJ
- **Rosemarie Newman KE2DPP (Returning Member)**, Millville, NJ
- **Ronald Newman KE2DPO (Returning Member)**, Millville, NJ
- **Aidan Pham KE2GFK (Student Member)**, Mickleton, NJ

Announcements :

- July Tech Saturday Forum rescheduled for July 12th and 19th.
- Clubhouse Closed Saturday July 26th due to Gloucester County 4-H Fair

Upcoming Clubhouse Events :

- License Testing July 10th @ 7 PM
- Tape Measure Yagi Construction Sessions July 12th and 19th
- Board of Director's Meeting July 16th @ 7 PM
- Dinner at the Clubhouse July 30th @ 6PM.
- August 9, 2025 Tech Saturday Forum : "Modifying the TIDRADIO TD-H3"

Member Current Activities :

- **Jon Pearce WB2MNF** discussed his portable radio adventure as **Bonaire PJ4/WB2MNF**.
- **Steve Farney W2SEF** reported on his 13 Colonies progress.
- **Angela Metzger KE2DRJ** got to work as W1AW while in Newington, CT.

Business Meeting :

- Minutes of the June 2025 General Membership business meeting were not published in Crosstalk due to an error. The responsible parties have been sacked. Those who sacked the responsible parties have themselves been sacked.

TREASURER'S REPORT :

2025 Year to Date Income and Expense

- Income : \$10,477.38
- Expense : \$6,888.67
- Net : \$3,588.71

July 2025 General Membership Meeting Minutes - Continued on page 51

GLOUCESTER COUNTY AMATEUR RADIO FOUNDATION :

Report : **John O'Connell K2QA** reported on the current financial state of the Foundation.

CLUBHOUSE REPORT :

Report : **Al Arrison KB2AYU** discussed the latest updates to the tower work at the Clubhouse.

DX AND CONTESTS :

Report : **Tony Starr K3TS** via Zoom reported on upcoming contests for July 2025.

EDUCATION COMMITTEE :

Report :

- **Chris Prioli AD2CS** reported on preparations for the Yagi Construction Class.
- **Jon Pearce WB2MNF** discussed the upcoming STEM Camp at the Clubhouse.

TECHNICAL COMMITTEE :

Report :

- **Jon Pearce WB2MNF** reported on some upcoming Tech Saturday Forum topics.
- **Angela Metzger KE2DRJ** discussed her experiences at the ARRL Teacher's Institute.

OLD BUSINESS :

Motion to approve the treasurer's report seconded and passed by voice vote of members present.

NEW BUSINESS :

- **Ron Block NR2B** reported on preparation for the Club Hamfest on September 7th.
- **Chris Prioli AD2CS** talked about how well the Club built bandpass filter performed and suggested building them for additional bands for next Field Day.
- **John O'Connell K2QA** made a motion to establish a restricted fund of \$1,000 available to the BoD for Clubhouse expenses without need for General Membership approval for each reimbursement. Motion seconded and approved by voice votes of members present.

PRESENTATION : "Pizza Night"

Meeting adjourned @ 1948 Hours

Respectfully submitted,
John Zaruba Jr K2ZA,
Recording Secretary



**National Ice Cream
Sandwich Day**
www.NationalDayCalendar.com

August 2

Gloucester County Amateur Radio Club

Board of Directors Meeting Minutes

Wednesday, July 16, 2025



Meeting opened @ 1900 Hours by President Jonathan Pearce WB2MNF

Attendance :

- President Jon Pearce WB2MNF : Present
- Vice President Ron Block NR2B : Present
- Treasurer John O'Connell K2QA : Present
- Recording Secretary John Zaruba Jr K2ZA : Present
- Corresponding Secretary Mike Resnick N2WOQ : Present
- Director (2023-2025) Chris Prioli AD2CS : Present
- Director (2023-2025) James Wright N2GXJ : ZOOM
- Director (2024-2026) Al Arrison KB2AYU : Present
- Director (2024-2026) Bill Price NJ2S : Present
- Director (2025-2027) Jeffrey Garth WB2ZBN : Present
- Director (2025-2027) Frank Romeo N3PUU : Present
- Trustee (2022-2025) Charles Lanard KD2EIB :
- Trustee (2023-2026) Sheldon Parker K2MEN :
- Trustee (2024-2027) Len Rust W2LJR :
- Trustee (2025-2028) Earl Moore KC2NCH : Present

New Member Applications :

- Lance Appel KE2UC (Returning Member), Vineland, NJ
- Daniel Bates KE2GJA, Deptford, NJ
- William Bennett KE2GJG, Woodbury, NJ
- Angel Papineau, Associate Member, Philadelphia, PA
- Steven Broomhead KB2RTZ (Returning Member), Blackwood, NJ
- Neil Sternstein K2RCH (Returning Member), Deptford, NJ

Treasurer's Report :

- Income : \$11,366.85
- Expense : \$8,255.59
- Net : \$3,111.26

Detailed financial statements are available for member review upon request.

Committees :

- **Clubhouse** : Al Arrison KB2AYU provided an update on tower commissioning along with wildlife management issues. Remote HF station back in service. 915 MHz solar powered Meshtastic node installed on 89 foot tower.
- **HamFest** : Ron Block NR2B discussed the mailing campaign progress in addition to the construction of a website for vendor registration. Also discussed Subaru setting up a display for a local pet shelter donations. Discussion of sound system issues and status.

July 2025 Board of Directors Meeting Minutes - Continued on page 53

- **Programs** : Second session of “Tape Measure Yagi” build class on July 19th, along with TIDRadio experimenting class on August 9th. September Tech Saturday Forum will be on September 13, 2025.
- **Education** : **Jon Pearce WB2MNF** reported on Woodruff School STEM Club activities. **Chris Prioli AD2CS** discussed status of classes set to resume in September.
- **Repeaters** : **Frank Romeo N3PUU** reported a lack of response from Brandmeister on establishment of DMR talk group.
- **Field Day** : **Jim Wright N2GXJ** reported on the Field Day QSOs being uploaded to eQSL and LoTW. Excellent job to all involved. **Jon Pearce WB2MNF** discussed a member’s suggestion about FD medals also budgeting for fabrication of additional bandpass filters.

Old Business :

- Motion to approve June BoD minutes seconded and passed by voice vote of Club officers present.
- Motion to approve Treasurer’s report seconded and passed by voice vote of Club officers present.
- **Ron Block NR2B** discussed Club agreement to provide WIFI for Gloucester County 4-H Fair.

New Business :

- Motion to have Subaru have a pet shelter fundraiser display seconded and defeated by voice vote of Club officers present.
- **Jeff Garth WB2ZBN** reported on issues with the EchoLink PC. Discussion of possible solutions.
- **Club Nets** :
 - 40 meter frequency : 7.170 MHz (+/- 5 or 10 kHz)
 - 2 meter nets : June 2025
 - Tuesday : Average 7.75 check ins
 - Thursday : Average 7.5 check ins

Meeting adjourned @ 2014 Hours

Respectfully Submitted,
John Zaruba Jr K2ZA
Recording Secretary



Happy Birthday! August 4, 1790



To Be Added To The DX HONOR ROLL or Update
Your Number, Please Contact
Ernest Kraus KD2EAV
meanddelcanotc@verizon.net



Wednesday, August 6, 2025



Thursday, August 7, 2025

Name/Callsign	DXCC
Bill Grim W0MHK	352
Dave Strout W2YC	349
Edward De Fonzo W2DE	339
Darrell Neron AB2E	337
Bob Pantazes W2ARP	300
Gary Castellini N2IEC	280
Vinnie Sallustio N4NYY	275
Sheldon Parker K2MEN	272
John Hill W2HUV	271
Jim Wright N2GXJ	269
Ken Denson WB2P	248
Tony Starr K3TS	247
Dennis Sandole K2SE	231
Art Strong KA0WS	163
Eric Morris N2BRJ	161
Howard Marder WA2IBZ	158
Steve Farney W2SEF	147
Phil Nunzio WA3RGY	144
Rich Subers W2RHS	133
Ben Johnson NE2R	127
Bart Kleczynski AC2PT	124
Marc Federici WM2Y	117
Chuck Capasso WB2PGE	104
Harry Strahlendorf W3DNQ	103
Jim Clark KA2OSV	87
Lee Marino N2LAM	71
Updated As Of 07/20/2025	

*Hmm...It's Saturday and you want to know if someone is at the
Clubhouse? Why not call and find out!*

W2MMD Clubhouse : 856-244-6914



August Birthdays

*Congratulations To Our Members Who Are
Celebrating A Birthday This Month*

Bryan Bossle KE2APN
David Danichkin KD2UXC
Richard Danner KE2FES
Paul Hart KD2WKL
Harry Jackson WB2GSF (President 1982)
Jacques Latoison KC3VYU
Charles Lessley KC3TZR
Daniel McCormick III KD2TUS
Craig Metzger
Jonathan Pearce WB2MNF (President 2023 - 2025)
Sean Pratt N1ZQU
Adam Sigmund
Courtney Smith KD2SPJ
Harry Strahlendorf Jr W3DNQ
Leonid Surnin W2/UT5ZF
Carl Wittig N2CRW
Kevin Wittwer

In Memoriam : August Birthdays

Paul Bergstrom N2GIB
James Bray Sr N2AKI
Edward Bubelis N2LCN
Vernon Byrd N2DRD
Edward Egolf WA2ZMS
Charles Emmel Sr KT2ZZ
Steven Fidler III N2GVR
Richard Fitch WA2YLC
Thomas Gordon Sr KB2GI
Seth Horen K1LOM
John Koch Jr K2CR
John Lachenmayer KB2RGX
James Mollica Sr K2OWE
Curtis Myers K2CWM
Bruce Painter N2ASN
Charles Pennington K3NMF
Salvatore Scibilia WA2LKF
Donald Smith WB2ZJF
Rev James Thompson III N2EDK
Harry Wolf KC2THV



CrossTalk Submissions

This is your Club Magazine. Make use of it.

If you have stories or photos of your hobby that you would like to share with the Club, please do so! We will keep covering all of the GCARC events, but it is also nice to get those personal perspectives to include in every issue. Connecting through experiences is what makes the Gloucester County Amateur Radio Club a **REAL** Club.

All submissions, queries, comments, and editorials should be addressed to :
Jeff Garth WB2ZBN at djgrath1 <at> gmail <dot> com

Submission deadline for the September 2025 issue : Wednesday, August 20, 2025

Club Website www.w2mmd.org

Club E-Mail Reflector : GCARC <at> Mailman <dot> QTH <dot> Net

W2MMD Clubhouse Test & Repair Bench Equipment and Supplies

Another FREE Clubhouse Resource Available To All Club Members



A Special Thank You to
Chris AD2CS for donating
the equipment and
organizing these test
benches

- | | |
|---|---|
| <ul style="list-style-type: none"> • YiHua 948 11-in-1 Solder Station • Universal Screwdriver Set • PanaVise PCB vise with full tilt and rotate on parts bin base • 500 Watt Dummy Load • 100 Watt Dummy Load • Heathkit HD-1234 6-position Coax Switch with RG-213 jumpers • Hook-up Wire : <ul style="list-style-type: none"> ♦ 18 AWG stranded ♦ 22 AWG solid and stranded ♦ 24 AWG solid and stranded • Bird 4304A Thruline Directional Wattmeter • CMS BE-01 Battery Eliminator 1A/1.5-15V Power Supply • 12 AWG Red/Black Dual Stranded ZIP Wire • Simpson 260 Series 5 Analog Multimeter • CMS ESR-01 Equivalent Series Resistance Meter • Elenco DT-100 Diode & Transistor Tester • TekPower TP50SW 50A/13.8V Power Supply • Elenco XP-720 12.6VAC/5VDC/1.5-15VDC 3A/1A Power Supply • RSR Electronix Express RSR-3040 15VAC/5VD/1.5-15VDC 3A/1A Power Supply • BK Precision 1803D Frequency Counter • KKmoon MHS-5225 Digital Arbitrary Waveform Signal Generator • Exact 121 Analog Signal Generator • Greenlee DM-510A Handheld Digital Multimeter • HP 34410A Benchtop Digital Multimeter • BK Precision 1655 Variable isolated AC Supply | <ul style="list-style-type: none"> • CMS Dim Bulb Current Limiter - 100 Watt • CMS BDST-01 Signal Tracer • CMS CRTT-01 Gas-charged Voltage Regulator Tube Tester • Conar 224 Tube Tester • GW LCR-814 LCR Meter • Siglent SDS-1102CML+ Digital Storage Oscilloscope • DX Engineering Coaxial Cable Gripper and Stripper (RG-8U / RG-213) • DX Engineering Coaxial Cable Cutter, Trimmer, and Crimper (RG-8U / RG-213) • DX Engineering RG-8X Die Set for Coaxial Cable Crimper • Adjustable Wrench Set for Slotted/Recessed Round Nuts • Speedwox Miniature Box Wrench Sets, Metric and SAE • 69238 Nut Driver Set, Metric • 69239 Nut Driver Set, SAE • Velleman K-8115 Universal Component Tester • Anderson Powerpole® Connector Assortment • Anderson Powerpole® Crimping Tool • Heat Shrink Tube Assortment, cut lengths • Ring Terminal Assortment • Alignment Tool Set • Craftsman Wire Cutter/Crimper • Craftsman 6-piece Pliers Set • Laptop PC • Programming Cable Sets (2) • Test Lead Set • Oscilloscope Probe Set |
|---|---|

Announced DX Operations

www.ng3k.com/Misc/adxo.html

From The Shack of Bill Feidt NG3K : www.ng3k.com

August		NG3K		NG3K		NG3K	
2025 Aug02	2025 Aug08	Ogasawara	JD1BRC	JH7CSU	OPDX 20250605	By JH7CSU fm Higashi-machi, Chichijima; HF; mainly CW	
2025 Aug02	2025 Aug10	Mayotte	TO3K	LoTW	DXW.Net 20250613	By IV3JVJ IK3ZQA IZ3NYS fm IOTA AF-027; 80-6m; CW SSB FT8 FT4; 100w; QSL via IV3JVJ	
2025 Aug03	2025 Aug18	South Cook Is	E51KEE	LoTW	DXW.Net 20250623	By ZL2KE fm Rarotonga I; 40-10m; CW SSB; QSL via Club Log OQRS or IK2DUW	
2025 Aug04	2025 Aug13	St Kitts & Nevis	V47JA	LoTW	W5JON 20240124	By W5JON fm Calypso Bay; 160-6m; SSB FT8; yagi, verticals; QSL also OK via W5JON direct	
2025 Aug08	2025 Aug11	Br Virgin Is	VP2V	LoTW	TDDX 20250626	By KK4LWR as VP2V/KK4LWR and KD8RTT as VP2V/KD8RTT fm Tortola I; HF, focus on 6m; 100w; QSL via home_call direct	
2025 Aug15	2025 Aug29	Greeland	OX NEW	DL6YYM (B/d)	DXW.Net 20250705	By DL6YYM as OX/DL6YYM fm IOTA NA-134 (Aug 15-18) and NA-018 (NA-018); HF; CW; QRP	
2025 Aug16	2025 Aug23	Guatemala	TG4	LoTW	KT8X 20250627	By KT8X as TG4/KT8X; 40-6m; CW + digital; holiday style operation	
2025 Aug17	2025 Aug25	Dodecanese	SV5	LoTW	OPDX 20250625	By N3JWJ as SV5/N3JWJ fm IOTA EU-001; HF; FT8; QSL via Club Log OQRS	
2025 Aug18	2025 Aug22	Palau	T8	LoTW	DXW.Net 20250425	By JH6GFY as T88GF and JK6DXD as T88XD; HF; QSL via JH6GFY and JK6DXD respectively	
2025 Aug18	2025 Aug23	Chile	3G1P	Club Log OQRS	TDDX 20250520	By VE3LYC XQ7IR PA3EXX fm Ilotes Pajaros (SA-100 New); 40-10m; CW SSB; see Web for QSL details	

Also for your convenience, there is a direct link to NG3K on our website. Click on the NG3K DX Page.

August 2025 Contest Calendar - WA7BNM Contest Calendar : www.contestcalendar.com

August 2025

+ QRP Fox Hunt	0100Z-0230Z, Aug 1
+ NCCC FT4 Sprint	0100Z-0130Z, Aug 1
+ Weekly RTTY Test	0145Z-0215Z, Aug 1
+ NCCC Sprint	0230Z-0300Z, Aug 1
+ K1USN Slow Speed Test	2000Z-2100Z, Aug 1
+ 10-10 Int. Summer Contest, SSB	0001Z, Aug 2 to 2359Z, Aug 3
+ European HF Championship	1200Z-2359Z, Aug 2
+ ARRL 222 MHz and Up Distance Contest	1800Z, Aug 2 to 1800Z, Aug 3
+ North American QSO Party, CW	1800Z, Aug 2 to 0559Z, Aug 3
+ Hemus VHF Contest - 144 MHz	0600Z-1359Z, Aug 3
+ SARL HF Phone Contest	1400Z-1700Z, Aug 3
+ K1USN Slow Speed Test	0000Z-0100Z, Aug 4
+ ICWC Medium Speed Test	1300Z-1400Z, Aug 4
+ OK1WC Memorial (MWC)	1630Z-1729Z, Aug 4
+ ICWC Medium Speed Test	1900Z-2000Z, Aug 4
+ ARS Spartan Sprint	0000Z-0200Z, Aug 5
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Aug 5
+ ICWC Medium Speed Test	0300Z-0400Z, Aug 5
+ ZL Sprint	0800Z-0829Z (CW), Aug 5 and 0830Z-0859Z (SSB), Aug 5 and 0900Z-0929Z (FT4), Aug 5
+ Phone Weekly Test	0230Z-0300Z, Aug 6
+ A1Club AWT	1145Z-1300Z, Aug 6
+ CWops Test (CWT)	1300Z-1400Z, Aug 6
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Aug 6
+ Mini-Test 40	1700Z-1759Z, Aug 6
+ Mini-Test 80	1800Z-1859Z, Aug 6
+ CWops Test (CWT)	1900Z-2000Z, Aug 6
+ Walk for the Bacon QRP Contest	0000Z-0100Z, Aug 7 and 0200Z-0300Z, Aug 8
+ CWops Test (CWT)	0300Z-0400Z, Aug 7
+ CWops Test (CWT)	0700Z-0800Z, Aug 7
+ NRAU 10m Activity Contest	1800Z-1900Z, Aug 7 (CW) and 1900Z-2000Z, Aug 7 (SSB) and 2000Z-2100Z, Aug 7 (FM) and 2100Z-2200Z, Aug 7 (Dig)
+ SKCC Sprint Europe	1900Z-2100Z, Aug 7
+ QRP Fox Hunt	0100Z-0230Z, Aug 8
+ NCCC FT4 Sprint	0100Z-0130Z, Aug 8
+ Weekly RTTY Test	0145Z-0215Z, Aug 8
+ NCCC Sprint	0230Z-0300Z, Aug 8
+ K1USN Slow Speed Test	2000Z-2100Z, Aug 8
+ WAE DX Contest, CW	0000Z, Aug 9 to 2359Z, Aug 10
+ FISTS Saturday Sprint	0000Z-2359Z, Aug 9
+ YB Bekasi Merdeka Contest	1200Z, Aug 9 to 1159Z, Aug 10
+ SKCC Weekend Sprintathon	1200Z, Aug 9 to 2400Z, Aug 10
+ Kentucky State Parks on the Air	1400Z-2200Z, Aug 9
+ Maryland-DC QSO Party	1400Z, Aug 9 to 0400Z, Aug 10
+ 50 MHz Fall Sprint	1800Z-2200Z, Aug 9
+ SARL HF Digital Contest	1300Z-1600Z, Aug 10
+ K1USN Slow Speed Test	0000Z-0100Z, Aug 11
+ 4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Aug 11
+ ICWC Medium Speed Test	1300Z-1400Z, Aug 11
+ OK1WC Memorial (MWC)	1630Z-1729Z, Aug 11
+ ICWC Medium Speed Test	1900Z-2000Z, Aug 11
+ MMonVHF/DUBUS 144 MHz Meteorscatter Sprint Contest	2200Z, Aug 11 to 2159Z, Aug 13
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Aug 12
+ ICWC Medium Speed Test	0300Z-0400Z, Aug 12
+ ZL Sprint	0800Z-0829Z (CW), Aug 12 and 0830Z-0859Z (SSB), Aug 12 and 0900Z-0929Z (FT4), Aug 12
+ DARC FT4 Contest	1900Z-2029Z, Aug 12
+ NAQCC CW Sprint	0030Z-0230Z, Aug 13
+ Phone Weekly Test	0230Z-0300Z, Aug 13
+ A1Club AWT	1145Z-1300Z, Aug 13
+ CWops Test (CWT)	1300Z-1400Z, Aug 13
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Aug 13
+ Mini-Test 40	1700Z-1759Z, Aug 13
+ Mini-Test 80	1800Z-1859Z, Aug 13
+ CWops Test (CWT)	1900Z-2000Z, Aug 13
+ CWops Test (CWT)	0300Z-0400Z, Aug 14
+ CWops Test (CWT)	0700Z-0800Z, Aug 14
+ NCCC FT4 Sprint	0100Z-0130Z, Aug 15
+ QRP Fox Hunt	0100Z-0230Z, Aug 15
+ Weekly RTTY Test	0145Z-0215Z, Aug 15
+ NCCC Sprint	0230Z-0300Z, Aug 15
+ K1USN Slow Speed Test	2000Z-2100Z, Aug 15
+ ARRL EME Contest	0000Z, Aug 16 to 2359Z, Aug 17
+ SARTG WW RTTY Contest	0000Z-0800Z, Aug 16 and 1600Z-2400Z, Aug 16 and 0800Z-1600Z, Aug 17

August 2025 Contest Calendar - Continued on page 59

August 2025 Contest Calendar - WA7BNM Contest Calendar : www.contestcalendar.com

August 2025 Contest Calendar - Continued from page 58

+ Russian District Award Contest	0800Z, Aug 16 to 0800Z, Aug 17
+ ARRL 10 GHz and Up Contest	0900Z, Aug 16 to 0759Z, Aug 18
+ SARL Youth QSO Party	1200Z-1300Z, Aug 16
+ Keyman's Club of Japan Contest	1200Z, Aug 16 to 1200Z, Aug 17
+ Feld Hell Sprint	1600Z-1759Z, Aug 16
+ North American QSO Party, SSB	1800Z, Aug 16 to 0559Z, Aug 17
+ CVA DX Contest, CW	1800Z, Aug 16 to 2100Z, Aug 17
+ FISTS Sunday Sprint	0000Z-2359Z, Aug 17
+ NJQRP Skeeter Hunt	1700Z-2100Z, Aug 17
+ ARRL Rookie Roundup, RTTY	1800Z-2359Z, Aug 17
+ Run for the Bacon QRP Contest	2300Z, Aug 17 to 0100Z, Aug 18
+ K1USN Slow Speed Test	0000Z-0100Z, Aug 18
+ ICWC Medium Speed Test	1300Z-1400Z, Aug 18
+ OK1WC Memorial (MWC)	1630Z-1729Z, Aug 18
+ RSGB FT4 Contest	1900Z-2100Z, Aug 18
+ ICWC Medium Speed Test	1900Z-2000Z, Aug 18
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Aug 19
+ ICWC Medium Speed Test	0300Z-0400Z, Aug 19
+ ZL Sprint	0800Z-0829Z (CW), Aug 19 and 0830Z-0859Z (SSB), Aug 19 and 0900Z-0929Z (FT4), Aug 19
+ Phone Weekly Test	0230Z-0300Z, Aug 20
+ A1Club AWT	1145Z-1300Z, Aug 20
+ CWops Test (CWT)	1300Z-1400Z, Aug 20
+ Mini-Test 40	1700Z-1759Z, Aug 20
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Aug 20
+ Mini-Test 80	1800Z-1859Z, Aug 20
+ CWops Test (CWT)	1900Z-2000Z, Aug 20
+ Walk for the Bacon QRP Contest	0000Z-0100Z, Aug 21 and 0200Z-0300Z, Aug 22
+ CWops Test (CWT)	0300Z-0400Z, Aug 21
+ CWops Test (CWT)	0700Z-0800Z, Aug 21
+ NTC QSO Party	1900Z-2000Z, Aug 21
+ NCCC FT4 Sprint	0100Z-0130Z, Aug 22
+ QRP Fox Hunt	0100Z-0230Z, Aug 22
+ Weekly RTTY Test	0145Z-0215Z, Aug 22
+ NCCC Sprint	0230Z-0300Z, Aug 22
+ K1USN Slow Speed Test	2000Z-2100Z, Aug 22
+ Hawaii QSO Party	0400Z, Aug 23 to 0400Z, Aug 25
+ ARSI VU DX Contest	1200Z, Aug 23 to 1200Z, Aug 24
+ YO DX HF Contest	1200Z, Aug 23 to 1200Z, Aug 24
+ Ohio QSO Party	1600Z, Aug 23 to 0400Z, Aug 24
+ CVA DX Contest, SSB	1800Z, Aug 23 to 2100Z, Aug 24
+ SARL HF CW Contest	1400Z-1700Z, Aug 24
+ K1USN Slow Speed Test	0000Z-0100Z, Aug 25
+ QCX Challenge	1300Z-1400Z, Aug 25
+ ICWC Medium Speed Test	1300Z-1400Z, Aug 25
+ OK1WC Memorial (MWC)	1630Z-1729Z, Aug 25
+ ICWC Medium Speed Test	1900Z-2000Z, Aug 25
+ QCX Challenge	1900Z-2000Z, Aug 25
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Aug 26
+ ICWC Medium Speed Test	0300Z-0400Z, Aug 26
+ QCX Challenge	0300Z-0400Z, Aug 26
+ ZL Sprint	0800Z-0829Z (CW), Aug 26 and 0830Z-0859Z (SSB), Aug 26 and 0900Z-0929Z (FT4), Aug 26
+ SKCC Sprint	0000Z-0200Z, Aug 27
+ Phone Weekly Test	0230Z-0300Z, Aug 27
+ A1Club AWT	1145Z-1300Z, Aug 27
+ CWops Test (CWT)	1300Z-1400Z, Aug 27
+ Mini-Test 40	1700Z-1759Z, Aug 27
+ Mini-Test 80	1800Z-1859Z, Aug 27
+ CWops Test (CWT)	1900Z-2000Z, Aug 27
+ CWops Test (CWT)	0300Z-0400Z, Aug 28
+ CWops Test (CWT)	0700Z-0800Z, Aug 28
+ NCCC FT4 Sprint	0100Z-0130Z, Aug 29
+ QRP Fox Hunt	0100Z-0230Z, Aug 29
+ Weekly RTTY Test	0145Z-0215Z, Aug 29
+ NCCC Sprint	0230Z-0300Z, Aug 29
+ K1USN Slow Speed Test	2000Z-2100Z, Aug 29
+ SCRY/RTTYOps WW RTTY Contest	2200Z, Aug 29 to 1200Z, Aug 30 and 1200Z-2359Z, Aug 31
+ Feld Hell Sprint	0000Z-2359Z, Aug 30
+ ALARA Contest	0600Z Aug 30 to 0559Z, Aug 31
+ U.S. Islands QSO Party	1200Z, Aug 30 to 0300Z, Aug 31
+ World Wide Digi DX Contest	1200Z, Aug 30 to 1200Z, Aug 31
+ Colorado QSO Party	1300Z, Aug 30 to 0400Z, Aug 31
+ Kansas QSO Party	1400Z, Aug 30 to 0200Z, Aug 31 and 1400Z-2000Z, Aug 31

The W2MMD Repeaters

2 Meter Repeater

Output : 147.180 MHz

Input : 147.780 MHz

Offset : +600 kHz - PL : 131.8 Hz

(Conventional FM plus C4FM Capability)

EchoLink : W2MMD-R

70 cm Repeater

Output : 442.100 MHz

Input : 447.100 MHz

Offset : +5 MHz - PL : 131.8 Hz

(Conventional FM plus C4FM Capability)

The above repeaters are both

located in Pitman, NJ

GPS : 39.728481°, -75.131088°

1.25 Meter Repeater

Output : 224.660 MHz

Input : 223.060 MHz

Offset : -1.6 MHz - PL : 131.8 Hz

Location : Sewell, NJ

GPS : 39.746738°, -75.077094°

Meeting Calendar

General Membership Meeting

Wednesday, August 06, 2025

1900 Hours

Pfeiffer Community Center

Simulcast Live on ZOOM

Meeting ID : 914 7364 1808

Passcode : 843147

Join ZOOM Meeting Link :

<https://bit.ly/3Pt4dLO>

Board of Directors Meeting

Wednesday, August 20, 2025

1900 Hours

W2MMD Clubhouse

*“Ask not what your Club can do for you,
Ask what you can do for your Club”*

- KA2OSV

*“There’s More To Ham Radio Than
You Can Possibly Do!”*

- K3TS

SKYWARN™ Net

Sunday @ 1930 : 147.180 MHz Repeater

Gloucester County ARES Net

Sunday @ 2000 : 147.180 MHz Repeater

GCARC TechNet ZOOM Forum

Available Every Monday @ 1930 Hours

Join ZOOM Meeting Link :

<https://bit.ly/3K8bWwj>

Tuesday Afternoon 2M Net @ 1200 Hours

Monday & Thursday Night 40M Net

1930 Hours

7.170 MHz (Plus or Minus 5 or 10 kHz)

Thursday 2M Net @ 2000 Hours

All 2 Meter Nets Are Also On EchoLink :
W2MMD-R

*** Badges ***

Need a new or replacement badge
Contact “The Badge Man”

Chris Prioli AD2CS
chris@ad2cs.com

Question Pool Answers : E3C01:D; E3C02:A; E3C03:B; E3C04:C; E3C05:A; E3C06:A; E3C07:D; E3C08:D; E3C09:D; E3C10:B; E3C11:C; E3C12:B